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OF THE

INDIANA STATE MEDICAL ASSOCIATION

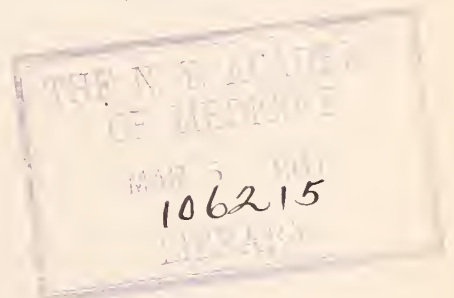
DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF INDIANA

ISSUED MONTHLY

UNDER THE DIRECTION OF THE COUNCIL

ALBERT E. BULSON, JR., B.S., M.D., F.A.C.S.
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JANUARY TO DECEMBER, INCLUSIVE, 1916

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OF THE

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VOLUME IX

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NUMBER 1

ORIGINAL ARTICLES

PRESENTATION OF A CASE OF HYSTERIA FROM THE VIEW- POINT OF THE FREUDIAN PSYCHOLOGY*

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Clinical Psychiatrist, Central Indiana Hospital for Insane,
INDIANAPOLIS

The newer scientific psychology of which Sigmund Freud of Vienna is the chief exponent, has, in the past few years so conspicuously entered the realm of general medicine, that, although the busy general practitioner may not have the time or inclination to resort to the psychoanalytical method of treatment, he will at least wish to have some understanding of the mechanism of a class of cases which he so frequently encounters, and which have been such a baffling proposition ever since the dawn of human history.

The Freudian psychology embodies methods and principles which have made it necessary to shelve many of the former standards and traditions, and, as a noted psychologist remarked to me recently, many of the ideas of the older psychology have been consigned to the waste basket. This not only holds good regarding the conceptions involved in practical technic but also in regard to the theoretical principles upon which the psychology of the individual is founded. The modern psychology is interpretative, as distinguished from the older descriptive type, and presents to us the mechanism of the origin and development of the content of thinking and feeling.

As this study is concerned with rather complex psychological situations of which it

will be impossible for me, on account of the very limited scope of this paper, to give any lengthy descriptive presentation, I will confine myself in a very concise and simple manner to some of the underlying principles upon which this newer psychology is founded; especially its application to hysteria, the evolution of the conception of which furnishes one of the most interesting chapters in psychiatry. ●

In order to illustrate the various basic points I will demonstrate these by a short report and presentation of a former case of hysteria to which a psychoanalysis has been applied. The lady has kindly consented to appear before this association.

I wish to emphasize that the term hysteria as used in this paper implies a distinct disease, and does not imply the ordinary lay interpretation of "hysterics" which is generally made to include all disorders which are too obscure to be otherwise explained. Hysteria is a disorder with very definite symptoms both in the mental and physical fields, and just on account of the frequency of disturbances of a somatic character, do the opponents of psychoanalysis who are so thoroughly imbued with the idea of materialism, believe this disease the result of an organic change in the brain, and consequently fail to see in mental abnormalities, any disturbance of function capable of bringing about just such a condition. Hysteria is a psychosis and not a neurosis, and an understanding of the principles of its psychology gives one a full appreciation of its real significance, for its determination also reveals the causative factors in the production of this disturbance.

The particular consideration upon which this is based and which is indispensable in its comprehension, and is the first step to bear in mind, is the sphere of unconsciousness or subconsciousness. In fact the psychology of hysteria

*Read before the Indiana State Medical Association at Indianapolis, Sept. 23, 1915.

is the psychology of just these subconscious states and their method of growth by a process of dissociation of the normal consciousness.

These subconscious impressions for which the individual has acquired a complete loss of memory, have been crowded out, so to speak, of the realm of consciousness. Since in hysteria the whole mechanism is subconscious in character, the patients usually are absolutely ignorant, as far as consciousness is concerned, of any reason for the symptoms which they present.

The buried impressions which have been crowded out of consciousness by the mechanisms of "repression," still remain dynamic however in the life of the individual, for these subconscious undercurrents later acquire the strength to dominate the entire personality. It is through the methods of psychoanalysis that we have been able to reveal that these so-called dormant, unconscious impressions are the influence which brings about the various manifestations presented in hysteria.

The various experiences and impressions which have become subconscious, constitute the so-called "submerged complexes" which are capable of being revealed by means of association experiments and analysis of reveries and dreams.

Now complexes or repressed experiences, by themselves have an influence only in so far as they are indissolubly bound up with emotions of painful content, for it is only then that they are capable of producing a reaction without the patient being aware of their existence. Consequently these complexes or painful experiences become dynamogenic, and when sufficient energy has been accumulated to overcome the resistance, as a result of a conflict, an explosion, so to speak, takes place, and in this manner succeeds in finding expression, and the result is the conversion of these complexes into crises such as we find in hysteria.

The question naturally arises, what are the opposing factors in this so called conflict? One of the functions of the mind is to adjust the individual as a whole mentally and physically to his environment. For example, we are continually adapting ourselves to the social conditions in which we live, taking on the customs, observing the rules of conventionalism, obeying the laws of the community, etc. Now in hysteria and in the insane in general, the condition is merely the result of a conflict between certain instinctive, biological trends of the individual

on the one hand, and these artificial restrictions imposed by the demands of our social and ethical culture upon the other. In this so-called struggle, the instinctive trend of the patient is the stronger of the two opposing forces at play, and is therefore victorious, and the consequent dissociation or splitting of consciousness occurs.

One of the most important and significant features of Freud's theory is the tracing of every case to a trauma of sexual nature and the evidence that the instinct of sex is most powerful and primitive is most convincing. He further claims not only that hysteria originates in a sexual traumatism, but that the original traumatic moment must have been in childhood, the prepubescent period. This theory that sexual instinct is a basic, dynamic mental factor, and that it operates in the unconscious and originates from infancy, is the point which has aroused such a strong prejudice against the Freudian psychology, for even scientific men have been repelled by this idea. This opposition is unfounded, for the difficulty lies in the misunderstanding of the conception of what is included in the sexual sphere, for the term as applied has a much broader meaning than is ordinarily implied in its sensual sense, and includes also all the finer instincts of love, and not merely what is interpreted as the animal nature in man. We will invariably note that upon the analysis of these cases the patients will present, for example, a decidedly stronger attachment to one parent than to the other, which frequently occurs as early as the fourth year of age. It is these infantile affections which continue throughout the adult life which have so much significance in the determination of the later life.

These complexes with their painful emotional coloring merely represent the repressed wishes and desires of the individual which are not permitted expression in the normal channel, and later find expression in the various disguises, which are called symbols, and it is in this manner that the unconscious wish gets its gratification. This connection between an imputed cause and the symptoms it occasions, and which is expressed symbolically, may be noted in normal individuals, as for example, the production of vomiting which ensues from a moral revulsion, or the watering of the mouth at the sight or even thought of a favorite dish.

These various explosions, which, so to speak, separate the conscious from the subconscious, are just what are manifested in the various symptoms of hysteria. Thus, we have the

phenomena of violent outbursts of excitement, transient deliria, epileptiform attacks, episodic depression and a multitude of other sensory and motor expressions, and in fact the manifestations of hysteria may be so variable that there is hardly a symptom in the category of medicine, be it mental or physical, which may not present itself at one time or another in hysteria.

Similarly to the various symptoms manifested, the patient's dreams can also be definitely traced to certain buried complexes. Some of these are recent and others date back to earliest childhood, and since they are analogous to the unconscious as are the manifestations of hysteria, one is easily convinced of the dynamic and purposive character of these phenomena. It becomes also evident that the various dreams as well as other phenomena are also a compromise, a symbolic expression of an inherent trend of the inner life of the individual, which pertains invariably to the biological reactions comprised within the sphere of social instincts.

Heretofore we have considered many phenomena within the psychic sphere as occurring haphazard and without any definite causal antecedents. In physical diseases a similar opinion was held for many cases until definite causes were later established. For example, before the days of bacteriology, pneumonia was commonly regarded as the result of a cold. We know now that it is really the product of an invasion by a specific bacterium. Thus, in mental diseases a psychic phenomenon is no more a chance symptom than a physical one, and just as science recognizes in a physical phenomenon a rigid principle of cause and effect, it does likewise in the psychical. The fact must continually be borne in mind that psychic phenomena have efficient causes and are definitely associated with these causes in as an inevitable way as the physical, or otherwise psychoanalysis would be absolutely impossible. Thus, however diverse these symptoms may be, they are no longer at random and disarticulate, but, upon analysis lend themselves to definite logical interpretation. It is just this interpretation of symptoms which has been the startling innovation in this new psychology, for it has made necessary, as I have previously stated, a complete resetting of certain of our primary fundamental conceptions.

The technic of psychoanalysis is to establish a necessary and definite connection between these individual symptoms and the exciting causes, for it is based on principles which find confirmation and corroboration in the most

diverse phases of mental phenomena, and in this technic we elicit exactly what we desire to have revealed.

The method employed in the technic of psychoanalysis varies somewhat with the individual needs, but the resources at our disposal which are most satisfactory, are the association tests and the analysis of dreams.

The association test gives us a ready method of gaining insight into the various complexes, and likewise gives us a survey of the patient's general psychological trend, while through analysis of dreams it is possible to enter the various crypts of the unconscious mind and bring to light many of the repressed and hidden experiences.

The method to pursue in undertaking a psychoanalysis by the association method, is first to have a detailed conversation with the patient, touching upon the various manifestations of the illness and also including the important events of his entire life. The physician must be alone in the room with the patient, as the presence of a third person makes psychoanalysis almost impossible. Freud has his patients lie on their backs on a lounge, the physician sitting behind the patient's head at the head of the lounge. The patient must remain free from all distracting influences and impressions, as noises of any kind, bright lights, etc. The object of this is by avoiding all muscular exertions and distractions, to permit a thorough concentration of the attention on the patient's own psychic operations. He is asked not to withhold any thoughts no matter how fleeting or insignificant they might seem, but to relate to the physician everything, even if such thoughts might cause embarrassment. In addition, when I touch a particular significant complex in the patient's life, I encourage him to write to me freely about it and to express every little detail which in any way might be associated with that particular idea. In this manner, I find that many buried ideas are unearthed readily, which could only be disclosed with greatest difficulty by personal interview. I will pass around for your inspection a rather voluminous manuscript which represents only a small part of the material necessary in unraveling our patient's tangled life. The various memory gaps, which must be later filled in, the little slips of the tongue, the apparently trivial contradictions, are just the material which requires the closest study, for thereby we may find a clew by which we may uncover the hidden mechanism.

Time will not permit me to enter into the psychology of dreams and into the very elaborate mechanism of their construction, for this in itself is a rather lengthy chapter in this new psychology. I will state however that the basic principle of dream analysis is the wish-fulfilment, and for an exhaustive study of the significance of dreams one is referred to Freud's great work "*Die Traumdeutung*" which is a most masterful contribution to psychology.

Many data in regard to the inner working of the mind are revealed to us by the so-called word-association test. This is accomplished by noting the reaction to a list of from fifty to one hundred words which are carefully chosen and cover the ordinary field of the average person's intellectual status. Distributed through the list are words which are supposed to have some special significance, which has possibly been revealed from a previous knowledge already obtained from the history of the case. The method of procedure is to read the words to the patient, instructing him to give immediately the first word or thought that comes to his mind. The length of time required for the reaction is recorded. This is done because when the word in the list, known as a complex indicator, touches a particular complex, a decided disturbance in the reaction is noted. Thus, for example, I had a case in which I inserted the word "ring" in the list of words, upon which the patient at first refused to answer at all, and upon repeating the word, after a prolonged reaction time, gave as the reaction word, the word "mother." The word ring in this case was a strong complex indicator, because the mother of the patient was largely a factor in the patient's mental conflict. She had objected to his marrying a young woman to whom he had presented an engagement ring, and had then gone to her and demanded its return.

The principle of the analytic psychotherapy is to overcome this so-called mental conflict, and make the patient realize the existence and influence of these unconscious and self-condemned desires, thus bringing about a re-association of the dissociated states. The secondary state is gradually merged into the upper consciousness, and since the symptoms are a compromise between the conscious restraints and the unconscious repressed desires, they will necessarily disappear when the patient becomes aware of their meaning. Thus, psychoanalysis cures our patients as a result of self-knowledge and ascertaining the cause,

although the method of treatment does not alter the neurotic inheritance which nearly all these patients possess. Consequently in dealing with these psychoneurotic patients we must continually bear in mind that we are dealing with an individual as a social unit, in relation to other social units, a relationship which, being based upon a state of hereditary instincts and reactions, is purely psychological in character. It can be readily noted that since the symptoms of hysteria arise from ideas, as for example, an hysterical hemiplegia, how absolutely ridiculous the application of electricity, massage of the limbs, or the administration of internal medication would be. Surgical operation with the pretense of removing certain abnormalities does even greater harm in these patients, for it only reinforces the patient's ideas which are already diseased, that the physical state is the cause of the disability.

It is generally known how the older doctors in every community like to shun cases of hysteria, and how every new physician on his arrival generally immediately gets a large number of these cases. The failure in obtaining results is because the condition is not considered a disease of the mind, and the only treatment is a reversal of the patient's belief.

It is not my object to give any long and detailed case report, but merely to emphasize the various fundamental principles just outlined in a brief examination of a former patient of our institution who is now before us. I will omit all data in her case history which do not have a direct bearing upon the points I desire to demonstrate. The symptoms to which I will particularly call your attention, and to which I will confine my analysis, were typical hysterical convulsive seizures which the patient had on an average of two or three times a week for a period of nearly four years, and that these would generally come on when a particular complex in the patient's subconsciousness was touched.

In order to reveal to you a subconscious mechanism at play here, it will be necessary for me to give a short synopsis of the life of the patient, in order to present the various elements at play which were productive in bringing about the necessary mental conflict. Running through the history of the case, there was a submerged desire on the part of the patient for her former husband, her childhood love, and a disintegration of the elements of her personality which could not be synthesized on account of a divorce from this husband and a marriage of both her-

self and the husband to other individuals, and later a still further impossibility of regaining her first and desired husband on account of his untimely death. The second husband was twenty-five years older than the patient, and the marriage was purely one of convenience. Under these circumstances the patient attempted to adjust herself to many disagreeable experiences of her life, and her mind in self-defense endeavored to crowd out and relegate to the realm of the forgotten, these painful experiences and memories, where they later led an independent existence in the form of a psychosis, not as its true self, but symbolized in the form of convulsive seizures.

The convulsions were the compromise by which these submerged complexes were permitted to enter her conscious personality; and by entering this domain and rendering accessible to consciousness the pathogenic complexes at the root of the disorder, and so inducing unity amid the discordant elements of the waking consciousness, she made a complete recovery and has not had a convulsive attack for over eighteen months.

Now why did the hysterical manifestations take the form of convulsions instead of a paralysis, an anesthesia, a phobia, or any other symptom? Further analysis of the life of the patient will explain that the convulsions were not accidental, were not purposeless and without meaning, nor did they occur at random, but instead offered themselves to definite logical interpretation, and if there had been any other symptom than convulsions it would have been referred to an analogous etiology.

At the time of the patient's first marriage, she was living with a Mrs. G. Mrs. G. had a great deal of domestic trouble with her husband which later led to a divorce. Our patient had a most friendly interest in Mrs. G. and sympathized with her greatly, and during her trouble she became more intimately acquainted with Mrs. G. and they are friends up to the present day. Shortly after Mrs. G's husband left her, Mrs. G. began to have convulsions which were attributed to her husband's desertion and ill treatment of her. Through the influence of sympathizing friends Mr. G. was induced to return to his wife, as it was thought that by his return her convulsions would cease. Mr. G's return was but for a short time, as soon afterwards they became divorced. Mrs. G. continued to have convulsions for several years afterwards.

At the age of forty, at the time of the beginning of her menopause, our patient began to have much trouble and sorrow. Her favorite daughter (daughter of her first husband) became ill and died, and it was at this time that the first evidences of her mental disturbances became manifest. She became despondent, lost interest in her household affairs, and the world in general, and led a very seclusive life. The loss of her daughter again revived the repressed affection for her first husband, who either in actuality or in some symbolized manner was continually before her mind, although he had already been dead five years. Shortly following this period she developed convulsions which occurred with no degree of regularity, and which I have already stated continued over a period of nearly four years. The patient would generally utter a loud cry preceding her convulsive seizures and the cry was so loud at times when at home, that the neighbors would rush into her house and offer their assistance. Following this, the typical globus hystericus was evident, and particularly the stage of clownism with various contortions, illogical attitudes and wide ranged movements was most typical. Patient would never injure herself in her fall and would generally have these attacks when some incident bearing on her home life was brought to her consciousness. Mrs. G. would frequently come before the patient's mind and she often thought how similar her sorrows were to hers, but at no time during her psychosis was she conscious of her convulsions being similar to those of Mrs. G. This fact only became clear to her after the psychoanalysis had already quite well advanced, and when the fact was brought to the realm of consciousness and the point made clear to her that her convulsions were in all probability like those Mrs. G. had, the patient suddenly remarked with considerable display of emotion, "Why Doctor those are just like the kind Mrs. G. had."

Thus the patient's convulsions were merely symbolic of the submerged desire for her first husband. It was while she was living happily with her first husband that Mrs. G. was having her sorrows, and it was the plea of sympathy which was presented to Mr. G., whose desertion was attributed as the cause of his wife's convulsions that temporarily reunited them. Thus, it may be noted that the symptom was not merely a chance symptom, but upon analysis could be logically interpreted, for the patient's convulsions were the expression of an

unconscious desire which could not find adequate expression in the field of consciousness. The buried and wishful impression here became dynamic in the patient and acquired the strength to dominate her entire personality.

The patient had many dreams, which upon analysis expressed a wishfulfilment and also showed that they were related to antecedent psychical events, and thus were not merely haphazard whims, but orderly determined phenomena which were capable of logical interpretation. I will relate only one of her dreams which I have designated as her "coffin dream." The content of this dream was that the patient was laid away in her casket. The minister who married her to her first and desired husband delivered the funeral sermon, and some of the witnesses of her first wedding were her pallbearers. Although the dream symbolized the patient in death, it was a pleasurable one to her because it removed the various elements of her mental conflict, and at the same time was wishfulfilling from the fact that while her desired husband was not represented in the dream, many of the individuals who were present at her wedding were there.

The history of the human race has been that every new discovery and every new thought has at first met with some opposition, and likewise there has also been criticism offered of the present method of psychoanalysis which I will not take the time to discuss. History records the persecution of Galileo when the announcement was made of his discovery from scientific calculations that the world was round, and you are likewise familiar with the great amount of indignation and resentment of certain classes, who, when the marvelous genius, Darwin, advanced the theory as to the descent of man, inferred that all men were monkeys.

A universal understanding of the psychological conception of hysteria will do much to give a clearer insight into the type of cases which have always been shrouded with mystery. Through a correct understanding of the disease, a rational psychotherapy is devised by which marvelous results have been attained for this most unfortunate class. Furthermore when the principles of this new psychology are more extensively known by the general medical practitioner, and the etiology and significance of the hysterical manifestations are more thoroughly understood, hysteria will rapidly decrease in frequency, for it is the general practitioner who is the first to come in touch with these patients.

DISCUSSION

DR. ERNEST H. LINDLEY, Bloomington: As a student of psychology rather than medicine I am interested in this Freudian movement which above everything else emphasizes the psychological conception of disease rather than the physiological conception. A man's mind may initiate troubles in his body just as disorders in his body may cause trouble in his mind. I mean in view of the fact that until very recent times the physiological conception, the materialistic view of disease has prevailed everywhere in medicine and it is high time that we recognize that just as truly as the body influences the mind, the mind influences the body. Take the facts of repressed complexes. Janet and Dubois and the Freudian group that studied hysteria discovered that men and women may suffer a dislocation of their present life. For instance a girl reported by Janet who was anesthetic in her hands. Her hands could be pinched, struck and hammered and she would go on talking as if nothing had happened. But Janet whispered to her and put a pencil in her other hand and immediately she began to write, "Stop pinching my hand." Something was taking place under all this local anesthesia. A defensive reaction was set up forming the automatic motions of writing and calling attention to the fact that this manipulation was not wholly unnoticed, although the primary consciousness was paying no attention.

In this country Sidis had one case, that of the Rev. Thomas Hanna, a cultured man, who as the result of a fall suffered a complete loss of memory. On recovering consciousness he was even astonished that he could breathe, and was so interested in finding that he was breathing that he made some experiments, and when he found he could control his own breathing he wondered why he could not control the movements of other people, but they happened to be nurses and doctors who misunderstood and sent him to bed. This man Hanna had lost every one of his memories. Very soon, however, in his dreams he began to have visions, scenes that seemed real, which he did not recognize at all but which his father recognized as scenes of his routine life, and in these dreams gradually there came forth the submerged life of the past. Sidis began to work with these dreams, took the patient to New York and subjected him to forms of stimulation that urban life would furnish. Within a day or two thereafter the man began to recognize his old memories for an hour or two, and would then lapse into the old state and it was a matter of some months of very careful work to get these two streams of consciousness together again. Finally Hanna came to a point where he was in possession of his old self, but there was also the new self with its recent memories, and the physicians struggled

to get these together and were finally successful. We have a record by the man himself, as well as by the physicians, the record stating further that there were depressed states involving the most fundamental needs and demands of a man's life which had been repressed, but which were welded into unity again with this primary self—whatever that is.

I have not time to suggest more than this—that this psychological approach to the functional disorders is so widespread now and its successes have been so striking that one must give a hearing to the psychological point of view.

What do we mean by the subconsciousness—the conscious and subconscious mind? I do not know. But Janet and others of his group have in a large per cent. of these cases welded these two together and the patients have gotten well, and that is what I am interested in.

The first case that was treated by the Freudian method in this State was a woman whose prognosis was hopeless; she was in the Central Hospital for the Insane. But they finally dismissed her as cured and so far as I know she is still cured.

As to the relation of all this to the general practitioner, I want to say a word. The emotions are the most vital diagnostic feature. Ideas may indeed move the world, but never until the emotions get behind them and furnish the steam. Any emotion, whether it be sexual or some other, has power to energize the body and compel man to do things, deliberately or undeliberately. Now the balking of emotion, the strangulation of emotion, the prevention of emotion finding its normal expression, is not infrequently the source of functional disorder, and where people live in repression, wherever a man's desires are checked, by environment or by the moral sense, you have as a result people living at war with themselves, and this finds physical expression sometimes, in paralysis, in convulsions, in all sorts of nervous disorders and excesses. The great bulk of nervous cases with which the physician has to deal are cases of balked desires, and the way out is to help patients find normal expression for their emotions. I would like finally to make a plea for the nervous patient. We recognize how difficult they are to handle; but I would like you to recognize the fact that there is not likely to be a conflict in the souls of people who have no moral sense nor ideals. Persons who do not feel the higher aspirations of life do as they please and let the devil take the hindmost. But if they have a moral sense these conflicts are more likely to arise, and they are potentially most valued members of the community. Now the way out is to give them something to do that is a normal expression of their emotions. Get them to work for other people; give them something worth

while for themselves and the community, and you cure them and at the same time you give these people their rightful place in society.

As to the role of sex. Freud expresses the belief that all these troubles grow out of sexual trauma. While sex looms very large, it does not occupy the whole field, and anger, fear and all the other emotions may be quite as important in producing this condition as sex. We are coming to take a very much broader view of this whole matter of traumas. Perhaps there were no wounds at all, but persistent emotions appearing for a long while and interfering with the normal functioning of the life physical, mental and moral, have caused this state of nervousness.

I have been tremendously interested as a psychologist in this pioneer work in our own State carried on by Doctor Bahr with such thoroughness.

And I would like to say to the practitioners who are interested in psychology that there is a little book by Dr. Hart, called "The Psychology of Insanity," which I think is very good psychology for the practitioner, whether he deals with hysteria or not. It states the subject very clearly, and physicians who have had occasion to read the book have told me that they went back to their nervous cases with a new insight and new hope.

DR. ALBERT E. STERNE, Indianapolis: I wish I could coordinately take up the discussion of this subject just where Dr. Lindley left off. We have had a most admirable presentation of a very difficult and obscure topic, one which is receiving the closest attention of psychologists. Psychiatry is really psychobiology—or biopsychology, whichever way you wish to say it. I would not, under any circumstances, have the impression obtain that I have the slightest feeling of antagonism toward the so-called newer doctrines. On the contrary, some of the seeming by strongest antagonists are in reality the strongest supporters of these doctrines, properly understood. The trouble is, as the essayist has remarked and Dr. Lindley emphasized, that the real underlying concept of this whole psychology is not understood, clearly understood, and it will be a long time before it is properly understood, because even its strongest advocates are still working in the realm of uncertainty, and we are bound to do that, as long as we entertain any doctrine which divorces the body entirely from the mind. This is an impossibility; it is an iniquitous doctrine. Mind cannot exist independent of matter. Dr. Lindley said that the mind influences the body. It unquestionably does, and it can influence our emotions, so-called, not only profoundly but arbitrarily, but the mechanism of this influence is physical. For instance, we all know how shock can momentarily cause palsy of the

stomach, how the secretions can be inhibited by shock, how the whole nervous system can be short-circuited through shock, even to the point of complete loss of consciousness and physical incapacity. Naturally the fundamental factor here is that, while we must recognize the psychogenic origin of certain diseases, not only mental but physical, we cannot, at this time at least, exclude the body from the mechanism by which the effect is brought about. In this patient without ever having examined her closely, I take note that we have a physical abnormality. I do not know how much the endocrine secretions had been tested out, but here we have a marked (whether simple or not) effect on the thyroid gland. How much this may have to do with her condition I am not prepared to state, but the endocrine secretions must be reckoned with in every case of this kind.

The most recent experiments indicate that the emotions are physical, that they are biochemical, and that their results are as manifest and as definite as any organic clinical entity that we can demonstrate in organs outside of the nervous system and the mind, which is its expression of active brain and body function.

An individual may be mindless on account of the organic condition of his brain, but he is not soulless in the sense that we ordinarily understand the word "soul,"—the spirit. I am an advocate of the psychogenic origin of certain diseases. There cannot be the slightest doubt that the man or woman who is constantly being traumatized by excessive worry or excessive fear—I do not care what kind of worry, whether domestic worry between husband and wife, or whether it be constant financial worry, the constant traumatization of the nervous system will make itself felt and ultimately it can produce actual organic affection. Furthermore, 80 per cent. of our reactions represent, after all, the response of the individual to any thought or any emotion expressed by his behavior and conduct. Analyzed down to the finest point it is a question of behavior and conduct which is the important factor in our modern psychology. It does not make one particle of difference what the content of a thought is, it is the response of the individual to the content of that thought which is of importance. It is his (or her) response to the content of that thought which measures his adaptation to the environment in which he is living, which measures his acceptance of the conventions, the rules and regulations of the community in which he may live. As long as his response is strictly ethical, that is, within the individual's control, it does not make a particle of difference what the individual may think.

Speaking of subconscious registration, I would like to express a view as to dreams and

the mechanism of dreams. First, I do not think the mechanism is nearly as complicated as it seems to appear and as the newer philosophy strives to make out. It is true, we are constantly, even in our conscious periods, in a coconscious or subconscious frame of mind, that is to say, there is going on all the time automatic registration of which we are not fully cognizant. We do not register upon our higher centers the things which are transpiring all about us. You will to get up from a chair and to walk, but after you have started to walk you are no longer conscious of walking, and, moreover, while you are walking you can do many other things automatically of which you have no conscious thought. In other words, we can have going on within us registration without full conception of such registration, but we can never achieve fully conscious registration except when we are partially or wholly conscious. That is, to me, a fundamental doctrine. While the automatic registration goes on, we cannot take cognizance of that registration unless we are awake. In dreams, therefore, when the individual is actually unconscious, that is to say when the individual is actually fully asleep, conscious registration ceases. Coconscious or subconscious registration may go on and probably does; but when we take cognizance of a dream we are no longer completely asleep. The dream may be sudden—in fact a dream is a probably instantaneous photograph—or it may seem to be a jumble of things over a long period of time ending in certain sensory impressions, but, as a matter of fact, the sensory impressions preceded the dream and the registration was so rapid that we relegate to the end of the dream the thing which actually started it. Dreams sometimes—as in this instance—are symbolic, I will admit, but that is in the vastly minor per cent. of cases. Ordinarily dreams represent nothing more than degrees of activity of the brain cells below that which we note in our waking consciousness. It is a much simpler proposition than the Freudian psychology would have us believe.

It would take me too far to enter into this subject as I might wish to do, but ere I cease I want to allude to the splendid work that Dr. Bahr is doing. Remember, in all I have said, while I voice my views exactly, I am not in any sense antagonistic, in special cases, to the application of Freudian principles, and I apply them myself. Very seldom is it necessary to apply them formally, very rarely indeed. In the vast majority of cases where you can gain the attention of the patient at all, a careful, painstaking explanation, a live analysis of the patient's modes of thought, is eminently sufficient, and an appeal to the patient's intellect, reason and logic wins out, as a rule, quite as well as psychoanalysis—excepting in those instances, of which

this may be one, in which the submerged complexes have not been brought to light by explanation in the ordinary way. But it must be an explanation that explains, not an explanation that befuddles. Explanations serve only to resuggest, to suggest anew. If these suggestions are, at times, inimical to the patient's welfare, how much more would psychoanalysis be inimical to his welfare, if that psychoanalysis be carried out haphazard, with poor understanding and with poor ability to apply it correctly. It is not that the physician has not the ability, but he may not have the time and patience to do it. It takes a tremendous amount of time. Apply it wholesale and it would be utterly impractical as a method of procedure. It would take all a physician's time for a very few cases, and in the end, in the ultimate analysis, he will have a large per cent. of failures. Therefore, there is danger in psychoanalysis applied irrelevantly, as there is danger in any other thing applied irrelevantly. But I would not have this company gain the idea from Dr. Bahr's paper that he advocates the wholesale, irrelevant application of psychoanalysis. He does not. It is a profound study of itself and its application is also profound.

Summing up this whole question, it may be covered by the one term—self-control. I do not care what you call it, in the end it is a question of the individual's controlling himself. This patient, and every other patient, was perfectly conscious of many of the impulses and emotions which she felt, but which she states were unrecognized. But she locked her understanding to their explanation, just exactly as people all over this country are locking their understanding and reason to perfectly self-evident facts. When we teach our boys and girls to control themselves, control whatever emotions they may feel, though at times I grant that the physical condition may render such control well-nigh impossible, and teach them to recognize that the two fundamental principles which guide all animal creation are alive in us and need control—then they will not stray very far. We will not then see so many instances of hysteria or paranoia, for hysteria is fundamentally nothing but paranoia—a little less fixed, a little less engrafted if you will. When we control these two fundamental principles, namely self-sustenance and sexpropagation by the exercise of our higher psychic senses rather than anything else—then we will have very few of these cases. Lack of control of these two fundamental principles is practically responsible for all of the deviations which we call crime and other conditions allied thereto, some of which we note in instances of this kind. All control is acquired, it is not inborn. Control must be educated into us, with the growth of understanding. Providence protects the girl, up to a

certain period of her life, from the worst results of that which she did not and was not of an age to understand; He wisely deferred her ovulation period and motherhood until a time when she could be expected to understand the significance of her acts. Shall we disregard His forethought or pattern after it? Shall we not rather teach the girl, so that she will not bear the fruit of a misdemeanor on her part which she in reality does not now understand; teach the child which does not know "mine" and "thine" in the beginning, what "mine" and "thine" means, lest that child never recognize what is mine and what is thine and continue to take for itself what it wishes, irrespective of whether or not it belongs rightfully to that child. In other words, teach him self-control, the one essential thing which should dominate conduct and behavior.

All of us can let ourselves go, and we all have had tragedies in life that have hit our emotions, hit our physical makeup, our highest mental and spiritual equivalents. Those who have stood up and taken their medicine are the ones who have won out, because they have exercised self-control. And it is the individuals who do not exercise that control who show aberrancy of conduct and the syndromes we encounter in the realm of hysteria and similar psychoses.

DR. C. F. NEU, Indianapolis: I have been especially interested in this patient because I was afforded an opportunity to care for her a short time before she was admitted to the hospital and was able to recognize conditions that were present at that time. I followed Dr. Bahr's study of this patient particularly.

We know that a great deal has been written and said about psychoanalysis and psychotherapy, especially the last five years. The medical profession probably as well as other professions in life are inclined to run off at a tangent sometimes, and a great many people have run off at a tangent in regard to psychoanalysis and psychotherapy. There is no question that this factor is not transient, it has come to stay, and we can utilize it or not, but we will be compelled to do so to a great extent. I am not attempting to throw cold water on Dr. Bahr's work, because I fully realize the work he has done; but the interpretation of manifestations, the patient's response to suggestibility, are powerful factors in the results which are obtained. Furthermore, in attributing cure of hysteria to disappearance of psychic manifestations, we know that before ever psychoanalysis came into existence manifestations of this kind disappeared as they do now. We know that the majority of individuals who have these manifestations do not respond to psychoanalysis or psychotherapy. There are just as many if not more failures with psychotherapy as there were before. I merely refer to this to bear out the

statement that psychoanalysis is not a cureall; it is one of the factors to which we have to resort in the analysis and in the management of this condition, but the question of cure is to be considered. Is this patient cured permanently, or is it just temporarily? We have all seen hysterical paralysis disappear and come again when the proper emotional complexes came up. Psychoanalysis has not been in application long enough to say whether we get a permanent cure or not. We do get temporary cures.

I want to congratulate Dr. Bahr on the work he has done here. A point that has not come out in Dr. Bahr's report is the immense amount of time and energy that it requires to make a psychoanalysis. It is not a method that is practicable to one in private practice where he has to struggle for existence. This analysis can only be carried out properly in the proper environment and with the proper attention, and that practically can only be obtained in institutional treatment.

DR. MAX BAHR, closing: I have not very much to add. Of course there will be an endless discussion of this subject. I am glad the discussants emphasized the limitations of psychoanalysis. Psychoanalysis is by no means to be classed in the category of miracle performers. It has its limitations. There are three points I wish to emphasize.

First, that the patient must be prompted by his own feeling, his own desire for treatment. Simply to send a patient to a psychoanalyst for treatment is not sufficient; his suffering must drive him to a physician.

Second, the patient must have sufficient education and understanding to know what is trying to be done; so patients that are weakminded are not fit subjects for psychoanalysis.

Third, the age of the patient must be considered. Patients past 50 years do not make good subjects because they do not have the facility of mental operation that we have in younger patients, and also in a patient over 50 the amount of material accumulated is so great that the time required to reveal this material is enormous. The type of patient best suited is the one with a functional psychosis, and particularly that of hysteria. A case of intoxication psychosis or delirium tremens would not be a good subject for psychoanalysis. So it has its limitations, but especially in hysteria and paranoia good results have been obtained.

Of course in presenting this patient I left out everything of a physical nature as referred to by Dr. Sterne. I knew of the enlarged thyroid glands, but I confined myself entirely to the psychic features because it would be an endless task to take up the various phases of this trouble.

I want to thank the gentlemen for their very kind discussion. Perhaps at some future time we may take up this subject more thoroughly.

THE POSITION OF OTOLARYNGOLOGY AMONG THE SPECIALTIES *

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The position of otolaryngology has greatly changed for the better in the past quarter century, and the change continues favorably. Only a few years ago the average specialist was expected to cure all "catarrhal" diseases of the upper air tract by the use of douches or sprays of cunningly devised combinations of medicines in oil or water basis. The practice of this specialty in Indiana was more or less typical of the practice elsewhere, and one of my earliest recollections of medical discussion in the Indiana State Medical Association concerned the plan of nasal treatment by the rhinologist whereby each patient "emerged on the street with the same greasy nose." All had received in the treatment room the same antiseptic spray, followed by the same "soothing" oil vapor. This discussion, then, and in later meetings, was not free from a partly deserved ridicule of the stereotyped plan of treating diseases of the upper air tract. It was clearly evident in those days that the specialty had no standing in medicine and was mentioned in contempt, if at all, in surgical circles.

Next followed an era of semisurgical attempts to treat the upper air spaces. A few specialists had returned from New York or London where chemical or electrical cauterization of the turbinates was advocated and extensively practiced, and where the turbinates were even completely sacrificed by removal with the spokeshave or snare. This was especially true of the lower turbinate, which was completely shaven away on slight provocation, and of the anterior half of the middle turbinate, especially in the presence of what was then designated necrosing ethmoiditis. Douches, powders and sprays were used no less vigorously than in the preceding period, and apparently with the same simple faith in their efficacy.

The end results of the treatment of this period were too frequently harmful. Without apparently going into all the details of diagnosis of the cause of the patient's suffering, turbinates were completely removed surgically, or their function wantonly destroyed by some plan of cauterization, often without relief to the patient, for the reason that the faulty respiration was

* Chairman's address before the Section on Ophthalmology and Otolaryngology of the Indiana State Medical Association at Indianapolis, Sept. 23, 1915.

often due to the presence of an adenoid, deflected septum or other deformity. Not only was the patient not cured by the foregoing measures but was too often made greatly worse by the inevitable dryness and crusting of the nose that followed indiscriminate and reckless destruction of the nasal interior.

The next period was one in which more, although yet trivial, attention was given to the special anatomy of the ear, and of the accessory sinuses of the nose. During this epoch those who did special postgraduate work seem to have been entirely satisfied to observe, in the clinics, some one do a cauterization, remove a turbinate or douche an ear. Post-graduate schools had sprung up in our large cities where courses in nose, throat and ear were offered lasting from a few days to a few weeks. All work was voluntary on the part of students who usually stood about and looked on. Some were, however, enough interested to take courses in special dissection of the head, which unfolded to them the great extent and real field of the so-called catarrhal diseases in the vast labyrinth of sinuses connected with the nose and ear.

To students who were well trained in medicine and the principles of surgery these anatomic courses furnished almost an entirely new insight into the real source of many suppurative diseases of the head that had formerly been classed as a whole, "catarrhal," and had been treated chiefly by douches and sprays which as we now well know never, in any case, reached the source of the disease. The relation of the adenoid structure to diseases of the upper air tract, and especially to the ear was also more completely worked out, and the removal of this structure, instead of the indiscriminate removal or cauterization of the turbinates was practiced and proved a long step forward.

The present period is one in which research into every branch of anatomy, physiology, medicine and surgery must be regarded as entirely essential to proper progress. Our most progressive members have realized that further advance and satisfactory standing among the several branches of medicine and surgery demand that the individual practitioner of otolaryngology must be more or less learned in all the medical sciences and eminently trained and learned in the field in which he practices, because while it is undoubtedly true that a large percentage of all diseases, both medical and surgical, originate in the upper tract and its environmental cavities, yet the relationship of these diseases to general ailments is such that the best

results in treatment will be realized only by those having a broad understanding of all.

So long as our branch of the profession was looked on as mere "nasal sprayers and oilers" its position in the medical sciences was one of more or less ridicule. Having received, perhaps with some justice, a low professional estimate, there is at present no small difficulty in establishing our department where it rightly belongs, namely, on an equality with modern medicine and surgery. Strangely enough, although I think the opinion due to our former trivial surgical methods, the general surgeon of today seems to have little regard or interest in otolaryngologic surgery, and apparently does not associate it with, or as a worthy companion to general or abdominal surgery. This feeling which seems to be genuine with the general surgeon is, I believe, due first to the fact that surgery, and especially abdominal surgery, was given a sacred halo while upper air tract surgery was still a struggling infant, and to the further fact which we may charitably believe, that the average general surgeon is not well informed concerning the extent of the otolaryngologic field of surgery, the deep seated and intricate anatomy involved, the superior knowledge required on the part of the operator, and in general, the vast amount of surgical and medical knowledge required to successfully carry out the surgical problems presented in the treatment of diseases of the upper air tract. Considering all the anatomic and surgical facts in each case, would any well informed surgeon believe that greater skill or surgical knowledge is required to amputate at the hip, remove an appendix or open a gall bladder than is necessary to eradicate the posterior ethmoidal cells, open a sphenoid cavity or to do a radical mastoid operation? All these operations are equally necessary in the attempt to cure by surgical means, and individual cases in either branch of surgery may tax the skill and surgical ingenuity of the operator; but the point I wish to insist on is that upper air tract surgery may be and often is the highest type of surgical performance, and when well and skillfully carried out entitles the operator to recognition as a real surgeon in any surgical circle.

Claim to the highest surgical recognition may justly be made by many tireless workers in otolaryngology today, but it has been doubted if it may be claimed in justice by all whom the post-graduate schools have turned loose on our country with certificates of special study. We are undoubtedly approaching a great and necessary change in the methods of preparing specialists. I can not admit that the mass of

otolaryngologists of today are in greater need of further preparation than are its gynecologists or surgeons, but all our leaders are urging a higher standard and it is vastly to our credit that we ourselves have recognized our deficiencies and are proposing methods whereby the standing of our specialty will in the near future be greatly raised.

The American Larynological, Rhinological and Otological Society, one of the most representative, largest and most learned special societies in the world, has adopted the following qualifications for the preparation of the future otolaryngologists:

1. An excellent general preliminary education, including a knowledge of the more important modern languages, an indispensable accomplishment for one who must follow the international literature of the day.

2. A postgraduate position as hospital intern, preferably in medicine, but better still in both medicine and surgery.

3. A year or more in general practice, during which he may try himself out, and when he chooses his specialty, choose wisely.

4. If the choice be otolaryngology, then must there follow an internship of at least eighteen months, devoted exclusively to the special subjects where he will toil daily with patients in a special clinic, mastering the details of examination and diagnosis and be trained under a master eye in the technic of operations.

5. Lastly, he must place a coping stone of a further year at some university where he will obtain postgraduate instruction upon:

- (a) Clinical diagnosis and treatment.

- (b) Functional tests especially.

- (c) Bedside work on surgical cases.

- (d) Surgical practice on the cadaver.

- (e) Practical treatment and minor operations in the out-patient's ward.

- (f) Demonstrations and lectures on normal and pathologic anatomy, histology and physiology.

- (g) Diagnosis and pathology of labyrinth diseases.

When finally he seeks the suffrage of his fellows of the general profession he must become attached to a hospital where he can maintain his contact with a public clinic, for otherwise he can never hope to advance, or even to keep abreast of his subject.

Ophthalmologists have been especially insistent on raising the specialty to a high standard of qualifications, and "during the past year the American Ophthalmological Society, the section on ophthalmology of the American Medical Association and the American Academy of

Ophthalmology and Otolaryngology have considered and adopted the reports of their respective committees recommending that graduate courses in ophthalmology representing at least two years of work subsequent to taking the degree of doctor of medicine be established in medical schools of the first class and that such work be recognized by conferring an appropriate degree on those who have successfully completed it."

The recommendations of the joint committee of the above representative American Associations is as follows:

1. That by the conjoint action of the American Ophthalmological Society, the Section on Ophthalmology of the American Medical Association, and the American Academy of Ophthalmology and Otolaryngology, a board be established to arrange, control and supervise examinations, to test the preparation of those who design to enter on the special or exclusive practice of ophthalmology.

2. That this board consist of nine members; three to be chosen by each of the above named organizations, in the same manner as their presiding officers are named. At the first election each organization shall choose three members, one for three years, one for two years and one for one year; and thereafter one each year to serve for a term of three years. Vacancies shall be filled for the unexpired term by the society from which the preceding member has been chosen. No member of the board shall serve more than six years continuously.

3. Members of the board shall serve without compensation, but shall be reimbursed for actual expenses while engaged in the work of the board, provided all other necessary expenses of the board and its appointees have been properly provided for.

4. The board shall appoint from its own membership, and from the medical profession outside its membership, a sufficient number of learned and skilled examiners who shall conduct the said examinations and report thereon to the board.

5. The examination may be held in any city of the United States where good facilities may be obtained for conducting clinical and practical examinations.

6. The board shall fix requirements to be met by all candidates for examination, which shall include the successful completion of a course in medicine in a medical school of recognized good standing, at least two years before the examination; adequate study of ophthalmology and allied subjects; and payment of an examination fee to be fixed by the board. It shall be authorized to prepare lists of medical schools,

hospitals and private instructors recognized as competent to give the required instruction in ophthalmology.

7. Each candidate whom the examiners report as having successfully passed the required examination shall receive by the authority of the board a certificate or diploma, setting forth this fact, but conferring on the recipient no academic degree.

8. The American Academy of Ophthalmology and Otolaryngology shall from the year 1920 require every candidate for membership in those bodies to possess the certificate above mentioned, unless the applicant shall possess a degree in ophthalmology conferred by a university recognized by them as competent to prepare its students for such a degree. The Section on Ophthalmology of the American Medical Association, in so far as it is empowered to adopt its own rules, shall from the year 1920, require that its officers and those members accorded places on its program shall possess the certificate in question or its equivalent, and shall request that in the directory published by the Association the holders of such certificate be especially recognized.

Until the high ideals outlined and adopted by the above representative American societies are carried out the position of our specialty will depend largely on the ambition and energy of its individual members, and on the societies which they make up. Annual attendance of members at the session of these societies will not, of itself, prove sufficient. Attendance on the several special societies is necessary, is a great source of inspiration to attempt more difficult tasks, and above all, furnishes the absolutely essential social side to specialism, but must be supplemented to be of great value, by individual effort in study and research.

Reference already has been made to the semi-contempt the general surgeon seems to have for the training of the ophthalmologist and otolaryngologist. This is partly just, and partly due to the disassociation of surgical discussion by each class of surgeons. I personally believe that greater benefit would result to all in our state society should a rearrangement of section work be brought about. A large part of the work of our specialty is entirely surgical. An interesting, necessary and growing part is entirely medical. A part of those who practice the specialty follow by choice and training the surgical side, while others, too few in number at present, depend more on medical means for a cure. Those who practice chiefly the surgical side of otolaryngology belong to and should attend the

general surgical section, where general surgical principles and surgical technic are thoroughly discussed. There is just as much reason why the otologist surgeon should enjoy the privilege of the surgical section as that the abdominal or orthopedic surgeon should do so. The same argument holds good for those whose otolaryngologic practice is largely along medical lines. These should belong to the medical section, where the papers and discussions of all medical subjects will be beneficial to all. Such an arrangement would better tend to broaden the medical and surgical vision of all. The argument applies best of course to state medical societies, for the existence of special medical societies is entirely essential.

The most immediate need of many, one might perhaps truthfully say most, otolaryngologists is a better knowledge of anatomy and pathology. Students with ambition to acquire a good working basis in these subjects formerly found it necessary to go abroad for study. Our state laws governing the acquirement of anatomic material have made home study of anatomy a possibility and foreign study an absurdity in so far as anatomy is concerned. At our very doorway stands the Indiana University with its medical department, offering as I believe, unequalled opportunity in anatomy and pathology to those really desirous of attainment in these subjects. There is, therefore, no excuse for any one of our members seriously lacking in qualification in these basic studies in medicine and surgery. Soon, it is hoped, other postgraduate opportunities may be added to the end that shortly we may have in our own state the opportunities for qualification equal to the requirements of the several special societies quoted. While, therefore, it is earnestly recommended that each individual member of this section should do his part to hold the position of our specialty abreast of all, I feel that the efforts of the American Laryngological, Rhinological and Otological Society, and of the American Ophthalmological, the Section on Ophthalmology of the American Medical Association and of the Academy of Ophthalmology and Otolaryngology to raise the standard of our specialties to a University basis should be encouraged, and that we, the section of ophthalmology and otolaryngology of one of the leading states of the Union, should take notice of these efforts and offer a resolution of encouragement and support. Should these resolutions be carried out and put into effect, as I have no doubt they will be, ophthalmology and otolaryngology must be given a position which will outrank all other specialties in medicine.

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INDIANA STATE MEDICAL ASSOCIATION

Devoted to the Interests of the Medical Profession of Indiana

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EDITORIALS

MILITARY PREPAREDNESS

Dr. W. L. Rodman, President of the American Medical Association, has sent us a copy of the resolutions passed by the Southern Medical Association, Dallas, Texas, Nov. 8-11, 1915, concerning reorganization of the Medical Department of the Army, and has asked that the resolutions, or similar ones, be adopted by every county medical society in Indiana, and that the United States senators and representatives from Indiana be acquainted with the action.

We are quite in accord with the spirit of the resolutions, and believe that the suggestion made by Dr. Rodman should be carried out. Any action on the part of Indiana medical societies should be prompt, inasmuch as congress is now in session, and if our influence is to carry any weight it should be exercised without delay.

As is stated by Dr. Rodman, the measure already proposed, looking to military preparedness, makes no attempt to provide the soldiery with sufficient medical attendants in a crisis, or in peace for that matter. No class of men is better fitted to pass on the number of medical officers necessary to treat and keep in health a given number of men as are the doctors of the country. In these days of preventive medicine, thorough knowledge of the etiology of disease and the precise methods for the care of the sick and wounded, armies have to be entrusted to specially trained medical men; otherwise casualties from avoidable diseases and lack of the proper treatment of the injured become very great. In the end the state is apt to suffer unduly in the matter of pensions, and the young and vigorous manhood of our country to be sacrificed.

The resolutions which are offered for the approval of the various Indiana medical societies are as follows:

WHEREAS, The President and the Honorable Secretary of War have announced in the public press that a scheme for the reorganization of the Army will be presented to Congress at its coming session which

will materially increase the military establishment, and

WHEREAS, We recall the indignant protests and criticisms of the nation at the failure to provide adequately for the sick and wounded at the beginning of the Civil War and the Spanish-American War, and

WHEREAS, It is known that this failure was due to the lack of a sufficient number of medical officers in the regular army and a means for increasing the medical establishment at the outbreak of the war, and

WHEREAS, In spite of the lessons of the Spanish-American War which were fresh in mind in the reorganization of the Army 1901, the Medical Department was not properly increased and no provision was made for its expansion in time of emergency, and

WHEREAS, To correct the defects of the 1901 legislation, subsequent legislation was necessary in which the medical profession of the United States was called on to assist; therefore, be it

Resolved, By the Southern Medical Association, in session at Dallas, Texas, that the secretary of war be petitioned to make adequate provision in the reorganization of the Army about to be presented to Congress for a sufficient number of medical officers for the regular establishment, which provision should aggregate a proportion of medical officers of, at least, seventy-five hundredths of 1 per cent. of the enlisted strength of the Army, or such number as the surgeon-general of the Army may deem necessary; and be it further

Resolved, That the secretary be petitioned to make provision in this reorganization for the expansion of the medical department at the beginning of the war, by calling into service in the Medical Reserve Corps physicians from civil life who have been instructed in their special duties as medical officers in our summer camps, and otherwise as the War Department may see fit.

THE DOCTOR'S INVESTMENTS

This is the season of the year when doctors as well as other men receive innumerable requests to buy industrial stocks and bonds, or are invited to invest in various promotion schemes of more or less doubtful value. However, it may be well to remember that the organization and promotion methods pursued by some corporations in this day and age may be attractive to some people and occasionally are worthy of the attention of careful investors, and yet the very methods pursued by the concern that can and does make good are methods pursued by other concerns that are not worthy of confidence. For instance, not a few corporations, when they desire to increase their working capital, resort to the plan of selling bonds, and offer as a premium a certain percentage of the common stock. Generally these concerns are what are known as "going" concerns, and are able to make good, so that not only are the bonds taken care of, but the common stock becomes

more or less valuable. In some instances, however, the sale of bonds is for the purpose of tiding over financial embarrassment, and the money derived from the sale of the bonds only postpones the evil day with the ultimate result of cleaning out the investors. Here is where the common stock, received as a premium, comes in for assessment, and the investor who thought when he purchased the bonds that even if he did lose it would only be the face of the bonds, finds afterward that he is assessed for the full value of his common stock, and the courts hold that he has to pay the assessment. Another delusion and snare is the certificates of stock which are sold below par, but are stamped "full paid and not assessable." The courts have held that in case of failure of the concern, any person who holds stock certificates that have been duly entered on the books of the concern is liable for any amount of money required to make up the difference between what has actually been paid for the stock, and what the face value of the stock is supposed to represent. In other words, one share of stock, the par value of which is \$100, and the certificate of which reads "full paid, and not assessable," must, in case of failure of the concern on which the stock is issued, represent on the books of the concern the actual payment of \$100. It may be that the certificate of stock has been given as a present, but that makes no difference in case the concern gets into financial difficulties. The holder of the certificate of stock can be held liable for the cash equivalent of the certificate of stock, and if it can be shown that no cash equivalent, or only part cash equivalent was given in payment for the stock, the holder of the stock can be held liable for the difference. It is well to remember these facts when making investments, and, on the whole, it is a wise thing for any one who desires to make an investment to inquire into the financial standing of the concern in which money is to be invested. Not a few concerns, showing glowing prospects as painted by the promoter, have few or no assets, and the more visionary the scheme the more attractive the investment is made to appear before those who have money to invest. The average doctor, who is thinking of putting his money into stocks and bonds will be wise if he takes advice from some conservative banker who is accustomed to looking close to responsibility before extending credit. Wiser still will be the doctor who cuts out stocks from his list of investments if he desires to have his surplus funds absolutely safe.

TAKING INVOICE OF CONDUCT

The beginning of the new year is an appropriate time for taking a mental invoice of conditions which make for failure or success in the practice of medicine. Many of us may be contented with the conditions under which we work, our ability to serve the public and the results secured. But have we a right to be contented? Are we doing the best that can be done for ourselves and for our patients, and if not, how shall we secure improvement? In the first place, every physician owes it to himself as well as his patients to equip himself by education, experience and the necessary instruments of precision to care for patients in the most approved manner. This means that the doctor must read the current medical books and medical journals, make frequent visits to the metropolitan clinics, and, above everything else, attend the meetings of medical societies, and particularly his local medical society, with a view to absorbing all that can be absorbed through the discussion of papers and association with his confrères having equal or greater experience. The question of giving the best service often includes exhaustive examinations and laboratory tests in order to arrive at correct conclusions, and the really competent physician must be prepared to give his patients this attention or see that they get it in order to obtain the desired results. The superficial and "hit-and-miss" examinations so common among some physicians will not do in this age of enlightenment when the public expects and can obtain conscientious and skilled medical attention. Too often the question of fees alters a physician's whole attitude toward his case, but the man who renders intelligent service will have no difficulty in securing adequate fees for it. Furthermore, in the analysis of the things that make for success and satisfaction in the practice of medicine a physician must consider his relations with his confrères and the medical profession at large. This leads us to a consideration of how much we adhere to the principle of charity toward our confrères, and the exercise of a spirit of professional helpfulness to one another. If we cannot speak well of a brother practitioner, there is no particular reason why we should speak ill of him, and there is never any excuse for taking unfair advantage of confrères. If there are differences of opinion or ethical questions to be solved, it is the manly and honorable thing to settle them directly rather than indirectly, for the old saying that there are two sides to every story may be the means of an

amicable adjustment of difficulties that, except through personal meeting, would go unsettled and lead to enmity or uncalled-for antagonism. The ethics of the profession is always a subject open to discussion, and in all probability there always will be a difference of opinion as to what really constitutes unethical conduct. Some things that are in exceedingly bad taste are not, generally speaking, considered unethical, but there is a common ground on which we all can meet in deciding as to what is proper and right as professional men. The real ethical doctor is the one who is ever honest with himself as well as with his patients and confrères, and at all times is a gentleman. Such a man does not need a code of ethics to tell him he must not speak ill of his confrères, nor that he must not adopt undignified and commercial methods to gain popularity and patronage. In reviewing our positions and progress it therefore is well for us to decide whether we can improve on conditions that have prevailed in the past, and whether we always have done our part in not only helping ourselves but in helping others to make the medical profession a greater power for good, and one that shall command greater respect and confidence of the people.

IMPORTANCE OF MOUTH INFECTION IN RELATION TO SYSTEMIC DISEASE

As a result of the renewal of interest in the subject of chronic infection in its relation to constitutional disease and the introduction of newer bacteriologic methods for the study of such diseases, a great deal of new knowledge has been added. Many different forms of disease, the cause and nature of which have been imperfectly understood until now, seem to be dependent on the presence of a chronic focus of infection somewhere in the body.

The principal sites in which foci of infection may be found are said to be the following:

1. The accessory nasal cavities, that is, ethmoid, sphenoid, frontal and maxillary.
2. The middle ear and mastoid antrum.
3. The tonsils.
4. The alveolar processes, including all forms of dental and alveolodental infection.
5. The genito-urinary tract, chiefly the prostate and seminal vesicles in the male, and the uterine adnexa in the female.
6. The gastro-intestinal tract, including the gallbladder and the appendix.

Not until very recently has it been shown that chronic infection of the teeth may be the apparent causative factor in various forms of systemic disease. Bacteriologic studies of infected teeth have yielded a streptococcus—either of the viridans or the hemolytic type—and the pathogenicity of this organism has been established. Since this is so, it is readily conceivable that the dissemination of these germs from a chronically infected mouth may cause metastatic foci of infection in other parts of the body. Thus there may and do occur in such cases acute and chronic tonsillitis, infections of the upper respiratory tract, chronic and acute arthritis, chronic valvular disease, acute nephritis, secondary anemia, and so on. The recurrent type of chronic gastric or duodenal ulcer has also been attributed to recurrent infection from diseased tonsils or infected teeth. In addition to the possibility of disseminating infection from the teeth to other tissues and organs in the body there is the danger of injury being done to the body from the constant absorption of toxic elements from the foci of infection. The idea seems to be gaining ground that many obscure symptoms, such as indefinite aches or pains, dizziness, headache, and so on, are to be regarded in some cases as the manifestations of a toxemia resulting from a chronic infection of the teeth, for with the proper attention given to this source of trouble all symptoms promptly disappear.

From now on physicians will have to devote their earnest attention to the question of dental infection in their patients. Their duty will not be ended when they merely refer these patients to the family dentist. Enough evidence has been accumulated already to prove conclusively that only too often the dentist fails to detect dental infection even though it may be quite pronounced. In suspected cases, when the usual examination is negative, radiographic films of the teeth must be made, for only in that way can one discover the presence of abscesses that may be deep seated or buried beneath bridge work or any other dental mechanism that may seem to be faultless. It must be emphasized that in a suspected case the examination is not complete unless such Roentgen-ray examination has been made.

Not only must the physician determine whether a chronic focus of infection around the teeth exists and its location, but when he has located it he ought to make a bacteriologic examination and prepare an autogenous vaccine. Effective local treatment in the hands of a den-

tist who is competent and who really understands the significance of focal infection of the teeth in its relation to systemic disease and the administration of an autogenous vaccine and the measures one must adopt for the relief and cure of this form of disease. Obviously in order to accomplish the desired result, intelligent cooperation between physician and dentist in the management of this group of cases is absolutely necessary.

WINTER CHOLERA

Dr. Osler says that if a physician knew all the varied forms of syphilis and tuberculosis he would have the fundamentals of medical diagnosis. Osler ought to have added typhoid fever to his list.

For the control of the spread of typhoid the number of cases reported by physicians is not of much assistance, since these cases are only a fraction of the actual number. Many of the unreported cases are called abdominal influenza, acute or chronic gastro-enteritis, intestinal bleeding, feverish neurasthenia and migraine. Mistakes in diagnosis of typhoid are especially apt to occur in epidemics due to water or milk.

In many cities with a public water supply there sometimes occur epidemics of gastro-enteritis followed in from ten to twenty days by epidemics of typhoid. In very few instances has the cause of the initial gastro-enteritis been recognized, until cases of typhoid appeared.

Many epidemics with thousands of cases of gastro-enteritis followed by hundreds of cases of typhoid have been reported. In every instance there was sewage pollution of the public water supply.

Other epidemics of gastro-enteritis have been reported without subsequent cases of typhoid and in these, too, there was sewage contamination of the public water supply.

This is not difficult to understand when we realize that acute gastro-enteritic symptoms may be caused by the *Bacillus typhosus*, *B. paratyphosus B* and the *B. dysenterica*, all members of the colon-typhoid group.

In the German literature there are descriptions of many epidemics of gastro-enteritis due to the ingestion of *B. paratyphosus B*, the so-called acute gastro-enteritic form of this disease.

In cold weather bacillary dysentery appears in such a mild form that dysentery epidemics are called "winter diarrhea." The cause of epi-

demics of gastro-enteritis in cities during the winter months should be recognized as due to typhoid, the source being the sewage pollution of the water. Every person in the district affected should be vaccinated against typhoid and competent engineers employed to find out how the sewage got into the city water.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

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We want THE JOURNAL to serve YOU.

AND now comes the "Oxypinene" cabinet, at several hundred dollars each! Lord, oh Lord, how long must the medical profession be inflicted with expensive cabinets, which serve little or no purpose except to turn dollars into the pockets of the promoters?

DR. J. B. MAPLE, secretary of the Sullivan County Society, and Dr. J. Y. McCullough, secretary of the Floyd County Society, have established a new precedent which may be called the *ne plus nultra* when it comes to collecting the dues. They sent in to the State Secretary, Dec. 31, 1915, the dues and receipts for more members for 1916 than they had in 1915. There is nothing to be desired beyond that from every county in the state.

HERE we have a great big eight-cylinder touring car. It moves quietly along, with little or no commotion, fuss, or jar. When it speaks, its horn is business-like and decided, but neither blatant nor excessively loud. And here we have a little two-cylinder limpbabout. It moves with a lot of racket, chortle and sputter. And when it speaks, its horn lets out a yowl that is a public nuisance. Automobiles are a good deal like men. The truly big ones make the least roar.—Puck.

A CERTAIN county secretary writes that he suspects that some of his delinquent members will send the dues direct to the State Secretary in order to avoid the county society dues. For the benefit of any one who might attempt this evasion, it may be said that memberships have not been nor will they be received except through the county secretary, as the local society is the arbiter of the qualifications to membership. If this were not so, it would be easy for a member who was guilty of unethical practices to slip by his local board of censors and meet all criticism with the statement that he was a member in good standing of the Indiana State Medical Association.

SOME of our friends in the dental profession are almost fighting mad because the Roentgen ray is showing up some of their very careless and inefficient dental work. Fillings, crowns and bridges have covered up much real dental pathology that should have been corrected before the mechanical work was done. Concealed infection in and about teeth has done an immense amount of harm and the dentists will do well to accept gracefully and profit by the disclosures made by the Roentgen ray. In fact, we believe that the science of dentistry will make wonderful advances as a direct result of the findings secured through Roentgen-ray examinations of the teeth before and after treatment. These advances will aid the medical man in eliminating some of the heretofore obscure causes of systemic infection or toxemia.

Now that county medical societies have new secretaries for the year 1916 it is appropriate to suggest that much in the way of medical organization and interest in the medical affairs in the several counties of the state depends on the interest, enthusiasm and work of the county medical society secretaries. As we often have said before, a secretary can make or break any organization, and we hope that the secretary of every county medical society in Indiana will take this statement to heart and make up his mind that he will make his society better than it has ever been before, and, while the making is good, remember that *THE JOURNAL* stands ready to give assistance by publishing reports of meetings and such news notes and personals concerning society members as seem appropriate for publication. Every county medical society secretary should consider himself a correspondent for *THE JOURNAL*.

THE temperance fanatics who may be guilty of the habit of partaking of various "patent medicines" are reminded that the much-despised American beer is tame in alcoholic content as compared to the average "patent medicine." The following figures, taken from government statistics, are rather interesting:

	Per Cent. Alcohol
American lager beer.....	3.8
English ale and porter.....	5
French claret.....	8
Rhine wine.....	8.7
Champagne	10
Sherry	17.5
Electric Brand Bitters.....	18
Peruna	18
Lydia Pinkham's Vegetable Compound.....	18
Paine's Celery Compound.....	19.9
Wine of Cardui.....	20
Gin	30
Whisky (American, common).....	35
Scotch whisky.....	40
Hall's Great Discovery.....	43
Brandy	47
Rum	60
Hamlin's Wizard Oil.....	65

IT is a little amusing to note how quickly a "dying man" recovers after he is released from the penitentiary. Many will remember how the newspapers and interested persons said that it was a crime to keep Charles W. Morse in the federal prison when at the point of death from an incurable affliction. As a result of pressure, President Taft issued a pardon. Of course, a common felon, guilty, perhaps, of stealing a pig to furnish food to a starving family, could die in prison without a word of sympathy or forgiveness, but the man who steals millions and wrecks the lives of countless people must be shown leniency. But the joke of the Morse case is that Morse quickly recovered his health after being liberated from the federal prison, and is now a leader in large financial transactions. This only goes to show that men do not always get their just deserts. Some get too much of a good thing, while others do not get enough.

THROUGH the efforts of the United States Public Health Service the cause and cure of pellagra has been discovered. The experts of the department have announced that the disease is caused by insufficient proteid diet. Obviously the eradication of the disease depends on the increase of proteids in the diet of those afflicted. Pellagra has been increasing alarmingly throughout the United States during the last eight years, and the government estimates that 75,000 cases of the disease will have occur-

red in the United States in 1915, and of this number at least 7,500 will have died before the end of the year. In many sections only tuberculosis and pneumonia exceed it as a cause of death. The experiment which brought about the discovery of the cause of the disease was carried on at the Mississippi Penal Farm, where a number of healthy, human white adult males developed pellagra after being placed upon a restricted one-sided diet composed mainly of carbohydrates. A number of experts declare that the disease produced was true pellagra.

SURGEONS who have been satisfied with merely boiling water in order to sterilize it will be interested in the statement of Dr. J. W. Jobling, professor of pathology in the Vanderbilt University Medical School, who, in answer to a question as to what constitutes a proper method to pursue when sterilizing water for surgical purposes, has the following to say in a recent number of the *Modern Hospital*:

"I think the question of the sterilization of water for surgical purposes has been definitely settled. All water used for this purpose should be sterilized under pressure, as the spores of tetanus bacilli and of other similar organisms are not killed by boiling unless it is done three days in succession, and then it should be boiled for a period of forty-five minutes or more each day. Of course tetanus spores are not found in every specimen of water, but we have no practical method of determining when they are or are not present. I should consider the surgeon using boiled water for surgical purposes criminally negligent, except, of course, in an emergency. I understand the question refers to water used in hospital operating rooms."

THE January number of *The Modern Hospital* has an illustrated article concerning the Walker Hospital, at Evansville, Ind., in which it is shown how it has been possible to build and develop a large hospital without the necessity of selling a share of stock or incurring an obligation to any one. As is stated in the article, "to distribute the stock to private individuals or to doctors who send patients to the hospital is apt to lead to a form of fee splitting which is a serious drawback to any institution. No church, lodge or other organization or individual has been asked to aid the enterprise." The hospital staff consists of five men, who own the institution. The keynote of success is thorough examinations, employment of every means of diagnosis, and team work. The hospital's capacity

is seventy-five beds. There are no wards, but two beds in a room are used for the cheaper accommodations. The hospital is modern in every particular, and, as is stated in the article to which we call attention, "the success of the enterprise proves its fitness and shows that a private hospital and clinic can be conducted on a high plane and can be of real service to the community; and the united and loyal efforts of those taking part in the work has benefited all."

SENSATIONAL medical articles in newspapers have become a common, every-day occurrence. Pathology is now a breakfast table topic and the science of eugenics agitates the fluttering breasts of stately matrons and young debutantes at afternoon teas. The most recent sensation concerns the action of a Chicago physician regarding an infant marred by various anomalies of development. The newspapers featured the case; they elaborated it with gossip, and discussion; with opinions from physicians; with the statements of social workers and psychologists; with letters of mothers and even of crippled and imbecile children. And the end is not yet. One newspaper publishes an autobiography of the physician, who promises to write, in serial form, the story of the case. The whole incident is nauseating. Infants with similar anomalies are born almost daily; no two cases are exactly alike; each is a problem unto itself. In this instance, apparently, the rights of the individual have been flippantly considered and the sacredness of the home has been ruthlessly bandied in public. Nothing has been nor can anything ever be gained by such disgusting discussion as has accompanied this particular incident. One person has been basking in the limelight of publicity, but in this instance it is not the brightness of the spotlight but a yellow sickly flame.—*Jour. Amer. Med. Assn.*

SOME of our readers are favoring us with fee bills offered by various indemnity companies for services rendered in connection with injuries that come under the Workmen's Compensation Act. Not a single fee bill that has been submitted to us offers fees which, in the main, are any where near the fees charged by the average physician in Indiana. For instance, think of reducing and furnishing dressings for a hip dislocation, and receiving \$10 for it; or of examining an injured person with a view to court testimony, and making a full and detailed report of the same, and receiving \$3 for it; then, be expected to testify in court for \$10, or to give

expert testimony for \$15! To top the thing off, most of these fee bills demand that "the latest approved methods of surgery shall be employed." Surely these fee bills that are presented to Indiana physicians are an insult, and the companies that proffer them are preying on the cupidity of the profession. It is bad enough for the average doctor regularly to charge the same fees that were charged thirty years ago when prices for everything were from 25 to 50 per cent. lower than they are now, and not half the time nor money was expended in obtaining a medical education. Will the doctor ever rise to the point where he can be as independent as the ordinary day laborer who refuses to work except for an established fee?

ONE of the readers of *THE JOURNAL* makes inquiry as to the number of doctors who actually read the well-prepared society reports published in every number of *THE JOURNAL*. He calls attention to a fact that we have long recognized, that for the most part the society reports are full of meat which ought to furnish splendid mental food for a large number of doctors who really need such nourishment, but he has discovered that among his acquaintances the ones who really need the nourishment most are the ones who are not taking it. He has not stumbled on anything new, for most of us know that the weak medical man along with the grossly incompetent doctor is the one who does not read medical journals, does not attend medical societies, and does not do postgraduate work of any kind. He is in a rut where he finds contentment, though he seldom fails to look with envy on his more fortunate confrères who are successful because they are progressive. However, for the benefit of those secretaries who, at no inconsiderable expenditure of time and energy are preparing such excellent medical society reports for publication in *THE JOURNAL*, we desire to say that their reports are read and appreciated by the class of men whose good opinion is sought. In other words, the best and busiest men in the profession do read medical journals, and they are not overlooking society reports that contain up-to-date and progressive ideas.

AN Ohio preacher, by the name of G. A. Kienle, pastor of St. John's Evangelical Church, has resigned from the local ministerial association owing to his unwillingness to vote for a prohibition resolution adopted by the association. The reverend gentleman says that he believes in temperance, but that by temperance

he means moderation and sanity in what we eat and drink. He offers further excuse that he could not conscientiously vote for prohibition for it would mean confiscating, or at least helping to confiscate millions of dollars' worth of property, and depriving men of a means of livelihood. With equal force might he have said that he could not conscientiously vote or work to stamp out prostitution and gambling, for it would mean the confiscating or destroying of expensive roulette tables, poker chips, cards, and the rich furnishings of houses of prostitution and gambling rooms. It also would deprive faro dealers, professional gamblers, prostitutes and many of their ilk a livelihood. As a matter of fact, Rev. Kienle is out of place in the ministry, and the ministry is better off without him. Probably his services would be more in keeping with his real feelings if he was a traveling representative of a brewery. We have absolutely no use for the Prohibition party as a party, but for the prohibition that is being advocated by people all over this land, irrespective of political affiliations, we are in entire sympathy, and a business that is as damnable as the liquor traffic should be wiped out of existence, whether it means destruction of property or not. Rev. Kienle is on the wrong side of the fence if he thinks that his action will stem the tide that is sweeping the country.

It is very evident that the stirring presidential address entitled "The Selling and Buying of Sick People," by Dr. R. S. Hill before the annual session of the Alabama State Medical Association, has borne fruit, for at the last regular session the Alabama legislature passed a law to prohibit the buying and selling of patients by physicians and surgeons or other persons, and the act defines what constitutes the buying and selling of patients, and fixes the penalty for violation of the act. In other words, it is a blow at the commission evil, and any one found guilty of giving or taking a commission is deemed guilty of a misdemeanor and on conviction may be fined, for the first offense, not less than \$25 nor more than \$500; and for the second or any subsequent offense, not less than \$500 nor more than \$1,000, and may also, at the discretion of the court or jury trying the case, be imprisoned in the penitentiary for not less than one nor more than five years; and in addition thereto, his license to practice medicine or surgery in Alabama may be canceled and annulled, and it shall ever thereafter be unlawful for such person to practice medicine or surgery in Alabama. Some

other states have passed laws dealing with this question of the buying and selling of patients by the physician or surgeon, and there is a movement on foot to have all the leading hospitals adopt rules which will prevent any fee-dividing or fee-accepting physician from enjoying the privileges of the hospital. It is very evident that such a movement is favored by the public, inasmuch as in some localities the initial step is taken by the laity and not by the medical profession.

WHILE our health boards are busy issuing precautions concerning sneezing and coughing in public places during the prevailing epidemic of influenza, it may be well to call attention to the necessity for a little more stringency in the regular inspection of certain features that are as much a source of the spread of disease as the ill-timed sneezing of influenza sufferers. We have in mind the transmission of diseases through the medium of employees in hotels, restaurants and eating houses. When you happen to know that there are cooks and waiters in regular service who are suffering from active syphilis or gonorrhea, to say nothing of other communicable diseases, it makes you feel that a law should be enacted and rigidly enforced compelling employees of eating houses to present a clean bill of health, and making it a penalty for any such employee to be on duty when he knowingly possesses a communicable disease. And, while we are on this subject, we desire to call the attention of our health authorities to another disgrace, and that is the question of ventilation of public places, and in particular the moving-picture theaters which are so popular at the present time. The average moving-picture theater is so badly ventilated that the air is fairly nauseating to any one coming in from outdoors. Aside from this, the semi-darkened rooms is taken advantage of by the tobacco chewer and the consumptive, who, realizing that he is not apt to be seen, has no hesitation in expectorating on the floor. The only way to correct some of these evils is to prosecute a few of the moving-picture proprietors and the human expectorating hogs who have no regard for the comfort or health of the public.

THE nostrum "Tanlac" is carrying out a vigorous advertising campaign throughout certain portions of Indiana, and if all of the endorsements that are printed are genuine they are a fitting testimony to the credulity of people, and

to some people who from education if not experience ought to know better. The feature of the advertising which medical men should ponder over is the unstinted endorsement given to this nostrum by some prominent druggists; and be it known that the druggists are the fellows who are looking to the medical profession for a good deal of their patronage. How long will it take medical men to wake up to the fact that the average druggist "knives" the medical profession every time he gets a chance? There is only one way to solve this problem, and that is for every physician to use his influence to have prescriptions go to pharmacists who are not purveyors of and exploiters and endorsers of the vilest "patent medicines" and nostrums. There perhaps is but one other way, and we are frankly in favor of it, and that is for doctors to own a controlling interest in the pharmacy where they desire to have their prescriptions compounded. This latter plan contemplates the dictation of a policy on the part of the pharmacy that is ethical and in keeping with legitimate pharmacy. This plan is followed by some fifty or more physicians in the city of Fort Wayne, and it has worked out very satisfactorily. It can be followed with satisfaction and profit in any town or city where physicians write prescriptions. It is one of the ways to fight the abominable nostrum evil, for no help in stamping out "patent medicines" can be expected from the average druggist.

THERE must be something in connection with the Protestant religion which prevents its disciples from contributing very liberally to hospitals if the experience of numerous towns and cities are to be taken as a criterion. It is quite true that there are Protestant hospitals that are well supported, but as a rule such hospitals have received large benefactions or endowments from individuals. In other words, such hospitals receive rather meager contributions from the Protestant churches of the community in which they exist. On the other hand, the Catholics, Lutherans, and some other sectarian orders seem to find no difficulty in maintaining splendid institutions, and as a general rule these institutions do not receive large benefactions or endowments from individuals. Our attention is called to this matter through the efforts, continued over a great many years, to support a Protestant hospital in the city of Fort Wayne. So far as we know the support given the project by the Protestant churches of the city of Fort Wayne has been insignificant.

Recently an effort was made to raise a sufficient sum of money to build and equip a new hospital but the effort ended in failure, as the subscriptions were not sufficient to cover the cost of a hospital worthy of the name. It is a sad commentary on the liberality and the much-boasted solidarity of the Protestant churches to note the niggardly attitude assumed toward this most commendable philanthropic enterprise, and to our notion the Protestants should blush with shame when they compare their own action to some other sects when it comes to the erection and maintenance of hospitals for the care of the sick and afflicted. In this connection a word of criticism also is due some of our municipalities that are quite willing to saddle the indigent sick and injured on hospitals of every class without so much as saying "by your leave." Hospitals at best never pay their own way, and of necessity are kept up by contributions, unless by good luck they happen to be endowed. Therefore, for a municipality, amply able to care for its poor, to take advantage of a hospital is the height of imposition. We believe that every municipality either should maintain a municipal hospital or should materially assist in the maintenance of other hospitals, and under no conditions should a municipality ask for favors which cannot be returned.

How to secure the cooperation and help of the business men in public health work is one of the greatest problems confronting medical men, and in particular, public health officers. Whenever a city is visited by an epidemic of diphtheria, scarlet fever, typhoid, or smallpox, the business men do everything in their power to keep the information from being published or spread in any way to the public. In some localities the business men are even so antagonistic that they resort to the most despicable and unfair means to discountenance the health authorities, and it is only when widespread disaster occurs in consequence of an attempt to cover up epidemics that these short-sighted business men discover their error. A doctor in one of the small towns of Indiana had the nerve to make a diagnosis of smallpox when the other doctors in the town were—ignorantly or otherwise—calling the disease "Cuban itch." The doctor who said that there was smallpox in the town was forced to leave between two days in order to save himself from harm by outraged business men who feared that the town would suffer if it became known that smallpox existed. The State Board of Health verified the diagno-

sis of smallpox, and ordered the schools closed and a general vaccination. Still the business men demurred and practically told the authorities to keep hands off. Not until half of the population of the town was prostrated with smallpox and the authorities had forced quarantine were the business men willing to cooperate in suppressing the disease. In the meantime many innocent persons had been afflicted, some of them being disfigured for life, and business had suffered a depression which lasted for months. How much better it would have been, and how much suffering—to say nothing of actual money—would have been saved had the business men supported the health authorities and prevented the spread of the disease in the infancy of the epidemic. How long will it take business men to learn that good health means a saving in dollars and cents, and that the way to preserve public health is to give the public health authorities prompt and unquestioned support in every endeavor to recognize and stamp out disease? Medical men in every community by solidarity of action can create a sentiment in favor of public health measures and their enforcement. It is false economy to try to hide or cover up disease.

DEATHS

SAMUEL O. DUNCAN, M.D., aged 48, died at his home near Russiaville December 18.

ELLA M. BARTON, widow of the late Dr. G. G. Barton, of Washington, died December 10, at the age of 90 years.

J. M. BOSWORTH, M.D., formerly of Winchester, died at Birmingham, Ala., November 23. Burial at Pennville, Ind.

GERTRUDE CAREY JAMESON, wife of Dr. Henry Jameson of Indianapolis, passed away December 10, aged 62 years.

JAMES A. HUTCHISON, M.D., of Salamonina, aged 76 years, died January 5. He was a graduate of the Cincinnati Medical College.

JOHN A. WELCH, M.D., died at his home in Lena, November 18 following a prolonged illness from nephritis. He was 68 years of age.

WILLIAM W. BLAIR, M.D., 89, of Princeton, one of the founders of the Gibson County Medical Society, and a surgeon in the Civil War, died January 3. He was a member of the Indiana State Medical Association.

WILLIAM B. GRAHAM, M.D., of Noblesville, passed away December 29 after several months' illness, aged 80 years. He was one of the oldest physicians in Hamilton County, had practiced medicine in Noblesville for fifty-four years, and was dean of the Hamilton County Medical Association.

ROBERT E. ANSLEY, M.D., of Indiana Harbor, died December 14, aged 44 years. Death was due to hemorrhages which developed from typhoid fever suffered while in service during the Spanish-American War. Dr. Ansley was a graduate of Rush Medical College, Chicago, and located in Indiana Harbor in 1903. He was a member of the local medical society, the State Association and the American Medical Association.

DAVID A. COX, M.D., of Howell, passed away December 12, aged 50 years. Death was from tetanus resulting from an infection of the nose. Dr. Cox was born in Union Township, Vanderburg County, Oct. 1, 1865, and entered the medical profession in 1890. He was active in medical circles, being a member of the Vanderburg County Medical Society, Indiana State Medical Association and the American Medical Association.

BENJAMIN H. PERCE, M.D., aged 77 years, died from nephritis December 3, at his home in Anderson. He was born at White Pigeon, Mich., in 1838, moved to Mooresville, Ind., at the age of 21 years, and enlisted in the Army at the outbreak of the Civil War, serving throughout the four years. After the war he attended the Indiana Medical College, from which he was graduated, and later took postgraduate work at the Medical Department of Northwestern University. He located at Anderson in 1891, where he continued to practice until a few weeks before his death. Dr. Perce was a member of the Madison County Medical Society and the State Association.

ROBERT S. ANDERSON, M.D., of Princeton, died December 22 from appendicitis, aged 55 years. Dr. Anderson was born at Princeton, Ind., in 1861, attended the Princeton public schools, read medicine with the late Dr. D. G. Powell, and attended the Kentucky School of

Medicine at Louisville, from which he graduated at the age of 22. He began the practice of medicine at Grove City, Ill., but removed to Princeton in 1892 where he has continued to practice until his last illness. He frequently took postgraduate work in New York and Chicago, and his record as a physician is one of a successful career. At the time of his death he was president of the Gibson County Medical Society, had filled the positions as city and county health officer, was surgeon of the Southern and C. & E. I. railroad and a member of the Indiana State Medical Association, the American Medical Association and the Association of American Railway Surgeons.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

INDIANAPOLIS

DR. FRED JACKSON of Indianapolis, who has been a member of the City and University Dispensary staff for five years, has handed his resignation to the Board of Health to take effect at once. He plans to go East and take a postgraduate course before entering private practice. Dr. Jackson has been a faithful and efficient worker at the Dispensary and the many friends he has made during that time wish him a continued successful professional career.

THE Senior class of Indiana University have dedicated the 1916 Arbutus, the senior class annual publication, to Dr. A. W. Brayton. Of 180 votes cast in the election Dr. Brayton received 74. Students in the advanced classes of the University School of Medicine entered Dr. Brayton's name and waged an enthusiastic and energetic campaign. This act is a fitting recognition of the popularity of Dr. Brayton with the students, for whom he labors from day to day.

GENERAL

DR. E. W. RINE of Winchester, has been very critically ill.

DR. A. C. McDONALD of Warsaw, has been quite seriously ill.

DR. C. H. MEAD of Bluffton, is recovering from a case of diphtheria.

DR. J. D. RICHER of Warsaw, fell recently, dislocating his right shoulder.

DR. WM. H. DAVENPORT of Vincennes, fell recently, fracturing his left arm.

DR. AND MRS. A. J. BANKER of Columbus have both been quite seriously ill.

DR. AND MRS. F. D. NORTON of Columbus have gone to Florida for the winter.

MRS. MARGARET SHARP, mother of Dr. Harry Sharp of West Baden, died recently at Jefferson.

DR. DANIEL YINGLING, aged physician of Huntington, recently sustained a fractured hip.

DR. S. A. SHOEMAKER of Bluffton, has returned from an extended trip through the West.

DR. JOHN J. OGLE of Fort Wayne, has left for Ocala, Fla., to spend the remainder of the winter.

DR. J. L. WARVEL of Sidney, has recently left Hope Hospital, Fort Wayne, where he underwent a hernia operation.

HOPE HOSPITAL, Fort Wayne, observed their third annual tag day on December 11, which netted them about \$1,200.

DR. PAUL GARBER, formerly of Mentone, has located at Sidney, taking up the work of Dr. J. L. Warvel, who is in poor health.

DR. O. O. ALEXANDER has been chosen to succeed Dr. J. R. Yung as attending physician of the Rose Dispensary at Terre Haute.

THE new nurses' home for the Lutheran Hospital, Fort Wayne, has recently been dedicated, and is a valuable addition to the institution.

DR. J. R. YUNG of Terre Haute, has resigned his position as physician for the Rose Dispensary because of his heavy private practice.

DR. GEORGE B. BREEDLOVE of Martinsville, was married on December 8 to Mrs. Callie M. Mitchell. The ceremony was performed at Indianapolis.

DR. J. E. MCARDLE of Fort Wayne, took up his duties on January 1 as coroner of Allen County. Dr. Edward H. Kruse has been appointed assistant.

DR. A. P. ROOPE and family of Columbus have gone to Florida. The family will remain for the winter, but the doctor will return to look after his practice.

A Cynthia physician inserts the following unique notice to settle:

"Man is made of dust!"

Dust settles ———

DR. C. A. WARWICK has removed from South Bend to Chicago, where he will take up post-graduate work. He will also be engaged in the insurance business.

MISS HELEN GILL, a chiropractor of Tipton, charged with practicing medicine without a license, was found "not guilty" in the circuit court after a three days' trial.

DR. E. L. BRANSCOME, from the state of Virginia, has located at Merrillville, Ind., taking up the practice of Dr. H. L. Iddings, which has been established for over thirty years.

CHICAGO'S surface street car company has favored the fresh-air advocates this winter by running a number of unheated cars, with doors and windows open, on the various lines.

Fair Patient—What would you advise me to do, doctor?

Family Physician—Either go South for the winter, or else put on more clothes.—*Judge*.

LAKE County is still working hard for a new tuberculosis hospital. A petition with 3,000 signers was recently presented to the County Commissioners by the Lake County Medical Society.

DR. GEORGE R. OSBORNE of La Porte, has been reelected county health commissioner, and Dr. H. O. Mertz of La Porte, has been reelected county asylum and jail physician for La Porte County.

DR. W. H. GRIEST, formerly of Newcastle, Ind., but who for some time past has been engaged in the practice of medicine at Caspar, Wyo., has located at Monticello, Ind., and will give his attention to surgery and general medicine.

THE forty-second semi-annual meeting of the Northern Tri-State Medical Association was held at Toledo, Ohio, January 11, with excellent attendance and most excellent scientific program.

ANNOUNCEMENT of the marriage of Dr. J. R. Weir of Indianapolis and Miss Hilda Stewart, trained nurse at the City Hospital, which occurred July 21, has just been made. They will reside at Coalmont.

DR. SIMON J. YOUNG of Valparaiso, has tendered his resignation as health commissioner of Porter County for the reason that he is unable to do justice to both his private practice and the county work.

DR. JOHN N. HURTY, secretary of the State Board of Health, was one of the speakers at the thirty-second annual banquet of the Kalamazoo (Mich.) Academy of Medicine, held at Kalamazoo December 14. "Men Who Think," was his subject.

PORTER COUNTY MEDICAL SOCIETY has elected the following officers for the coming year: President, C. O. Wilfong, Chesterton; vice president, H. B. Hayward, Valparaiso; secretary-treasurer, H. E. Gowland, Valparaiso; delegate, J. C. Carson.

SULLIVAN COUNTY MEDICAL SOCIETY has issued a souvenir calendar for the year 1916. It contains a list of the officers of the society, a list of the members, and the pictures of Drs. Orren Stoddard and Enoch J. Yeager, sixth and seventh presidents of the society.

THE Lake County Commissioners have approved of the request of the Lake County Medical Society for \$50,000 for a County Tuberculosis Sanatorium, and will ask the County Council for an appropriation of said amount at its next meeting.

THE Board of Health of New York City has passed an amendment to the Sanitary Code permitting the slaughtering of horses and sale of the flesh as food. This permit went into effect January 1, and revokes a prohibition which has been in force since New York became a city.

THE Board of Health of New York voted against making an official test of autolysin. A request had been made to make a series of tests, extending over three years, under the direction of a corps of specialists, but inasmuch as cancer is not a communicable disease it was felt that the expense of such a prolonged experimentation would not be justified.

THE new officers of the Gary Medical Society for the year 1916 are as follows: President, C. W. Yarrington; vice president, G. S. Greene; secretary, E. D. Skeen; treasurer, W. P. Alexander; censor, E. L. Schaible. The society has thirty members and a balance of \$54.65 in the treasury.

THE United States have been granted their request for the British and French governments to allow a six-months' supply of salvarsan and neosalvarsan to be shipped from Rotterdam for use in America. As soon as the shipment arrives in America it will be released to physicians and hospitals without increase in price.

DELAWARE COUNTY MEDICAL SOCIETY has issued a program for the coming year in the form of a very attractive and interesting calendar. It contains the names of the members of the society, the officers, date and time of meetings, and the subjects and speakers for each meeting for the year 1916. The center of the calendar is a lovely picture, "Motherhood," in black and white tones.

DR. J. A. HINES has presented a bronze tablet to the new Van Wert County Hospital in honor of his father, Philip Hines, who was the first physician in Van Wert (Ohio). At the top is a bronze relief of the venerable Dr. Hines, and below is the following inscription: "In Memoriam, Philip John Hines, M.D., Van Wert's First Physician. Graduated From the University of Maryland—1838, Came to Van Wert—1838, Born 1815. Died 1884. Presented to the Van Wert County Hospital by His Son, Dr. J. A. Hines."

IT will be noted in this issue of THE JOURNAL that the institution formerly known as Dr. Broughton's Sanitarium is now known as Dr. Weirick's Sanitarium. This is not a material change, as the management remains the same and the business is being conducted along the same lines as heretofore. This is evidenced by the fact that for eight and one half year Dr. Weirick has been connected with the institution—five as assistant superintendent and the balance of the time as superintendent. He now has associated with him Dr. W. H. Cunningham.

DR. J. N. HURTY, State Health Commissioner, of Indianapolis, was one of the speakers at the second Pan-American Scientific Congress which convened at Washington, D. C., December 27

to January 8. More than 1,000 delegates from the twenty-one American republics and a large number of diplomats and noted scientists, not delegated, were in attendance, and it was one of the most representative gatherings of scholars ever gotten together. Dr. Hurty was signally honored in being invited to be one of the speakers at this notable gathering. He spoke on "Rural Hygiene," pointing out the status of rural hygienic conditions, and outlined the work necessary for improving said conditions.

THE Twelfth Annual Conference on Medical Education, Public Health and Legislation will be held at the Congress Hotel, Chicago, Monday and Tuesday, Feb. 7 and 8, 1916, under the auspices of the Council on Medical Education and the Council on Health and Public Instruction of the American Medical Association. Monday, February 7, will be devoted to medical education, and Tuesday, February 8, to medical legislation and public health. President Keiper has appointed Dr. John C. Webster of LaFayette to represent the Indiana State Medical Association at this most important conference. Dr. Webster was for a number of years a member of the Indiana State Board of Medical Examination and Registration and has on several occasions attended the previous conferences. The Medical Department of the University of Indiana will be represented at this conference by Dr. Charles P. Emerson, dean, and Dr. Burton E. Myers.

DR. L. D. ELEY, health officer of Marshall County, has evolved a new idea in projecting public health literature. He visited the editor of the Plymouth Republican, and at a reduced rate purchased one page of an issue. He then sold the margin of the page to business men in squares at a price to cover the cost of the whole page. The center of the page was occupied by two articles on public health. One related to the very great importance of school hygiene and the care of the health of school children, and the other was a brief presentation of the prevention of tuberculosis. In another issue another set of business men will purchase the page at a reduced rate, and Dr. Eley will have something further to say in regard to public health matters. Dr. Eley has also had his disease prevention articles printed as a supplement by the Argos Reflector. The proprietors of this paper printed and inserted the supplement without charge, making it their contribution to the public health cause.

DURING December the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

Heilkraft Medical Co.: Dimazon, Dimazon Oil, Dimazon Ointment, Dimazon powder.

Hoffman-LaRoche Chemical Works: Bethain Hydrochloride, Roche. Beta-Naphthol Benzoate, Roche. Ergotinine Citrate, Roche. Homatropine Hydrochloride, Roche. Seiden Peptone, Roche. Theobromine and Sodium Acetate, Roche.

Hynson, Westcott & Co.: Mercury Binioidide Oil Solution in Ampules, H. W. & Co.

Knoll & Co.: Ichtalbin Tablets, 5 gr. Tri-ferrin Tablets, 5 gr.

Merck & Co.: Antithyroidin Moebius Tablets, $\frac{3}{4}$ gr. Apiol, Merck. Berberine Hydrochloride, Merck. Creosote Carbonate, Merck. Dionin Tablets, Hypodermic, 1 gr. Dionin Tablets, $\frac{1}{4}$ gr. Ergotin, Merck. Euquinine Tablets, 2 gr. Euquinine Tablets, 5 gr. Ferratin Tablets, $\frac{1}{2}$ gr. Iodipin Tablets, 3 min. Iron Lactate, Merck. Liquid Petroleum, Merck. Ouabain, Merck. Phenophthalein, Merck. Phloridzin, Merck. Quinine Tannate, Merck. Sodium Phosphate, Monobasic, Merck. Sodium Nucleinate, Merck. Stypticin Tablets, Hypodermic, $\frac{3}{4}$ gr. Stypticin Tablets, Dental, $\frac{3}{4}$ gr. Stypticin Tablets, Sugar Coated, $\frac{3}{4}$ gr. Sulphanilic Acid, Merck. Theophyllin Sodium Acetate Tablets, .15 gm. Triphenin Tablets, 5 gr. Tropicocaine Hydrochloride Tubes, Sterilized, 1 gr. Veronal Sodium Tablets, 5 gr.

H. K. Mulford Co.: Diphtheria Toxin for Immunity Test (Schick Test), Mulford.

Parke, Davis & Co.: Iodalbin and Mercuriol Tablets. Mercuriol Tablets, $\frac{1}{4}$ gr. Mercuriol Tablets, $\frac{1}{2}$ gr. Mercuriol Tablets, 1 gr. Mercuriol Tablets, 2 gr. Mercuriol with Potassium Iodide Tablets.

Powers-Weightman-Rosengarten Co.: Calcium Phenolsulphonate, P.W.R.

Swan-Myers Co.: Swan's Typhoid Bacillus Vaccine (No. 44) (Hospital Package). Swan's Typhoid Bacillus Vaccine (No. 44) (Board of Health Package).

Lehn & Fink: The Council has recognized Lehn and Fink as selling agent for Chloralamid, Schering.

THE Indiana State Hygiene Laboratory, under the superintendency of Dr. William Shimer, now occupies and is fully equipped in

rooms in the Gallup Block opposite the east entrance to the State House. Heretofore this laboratory was in a single room in the State House and the congestion and confusion following thereon was very great. In the new quarters, where eight good-sized rooms are occupied, the laboratory will be prepared to do more and more accurate work than ever before. Dr. Shimer has seven persons to help in his department. Dr. Ada Schweitzer is the first assistant; Dr. R. J. Anderson, second, and Dr. Chester Demaree, third assistant.

The Statistical Department under the superintendency of Dr. Charles A. Carter also is removed to the Gallup Block. This department, heretofore cooped up in the overcrowded departments of the State Board of Health in the State House, now occupies two good-sized rooms and better work will certainly be done than heretofore. This department will soon be supplied with tabulating machinery of the latest invention, instead of using the old method where clerks prepared classification, tabulation and analysis in the old-fashioned way of "calling back."

The congestion of the offices of the State Board of Health being relieved, room is gained for the better indexing and classification of accounts and records. The assistant secretary, Dr. W. F. King, is now supplied with an independent office, free from the noise and confusion and crowded conditions which formerly restricted the best work.

The State Board of Health now consists of eight departments—executive, statistical, food and drugs, water and sewage, bacteriologist and pathologic, pasteur, weights and measures and accounting. Each of these departments has its superintendent with employees.

The correspondence of the departments amounts to an average of 150 letters a day. It employs a number of stenographers and clerks.

The above represents the improvements in the State Board of Health in the last twenty years. In 1898, when the present secretary was appointed, the force of the State Board of Health consisted of the secretary and one stenographer and one clerk. At that time the correspondence amounted to about six letters a day. The vital statistics was not one half collected, no food and drug, no water and sewage and no pathologic and bacteriologic work was done. The fact now is that the physicians of the state send in 20,709 specimens to the pathologic and bacteriologic laboratory annually, and the fact

that the pure food and drug department handles and analyzes 898 specimens annually, and the fact that the water and sewage department is constantly making surveys and receive and analyze 1,520 specimens of water and sewage annually, shows the great extent to which the physicians and the people of the state appreciate this important health service. In all these years perfect harmony has existed among the members of the state board. There have been differences of opinion on subjects, but as said, perfect harmony and friendship and good will has ever been pleasant and harmonious. Since the Pasteur Laboratory was established in 1911 1,059 specimens of brains of animals supposed to be rabid have been examined and 816 patients bitten by mad dogs have been given pasteur treatment.

The State Board of Health issues a Book of Instructions to Health Officers (red book). This contains all the health laws and health rules of the state of Indiana, also specific instructions to health officers. So far as we know, Indiana is the only state that publishes such a complete book as this one. All other boards of health of other states have received and acknowledged with thanks this useful book.

The Indiana Mothers' Baby Book, which was authorized by the legislature of 1913, a copy of which is sent to every first mother, grows more and more popular. Scarcely a mail that does not request this book. Editorials have appeared in *The Journal of the American Medical Association* concerning this book and also in many other magazines. Several metropolitan dailies in the great cities have also given editorials concerning this book. The book has three central ideas: (1) to carry clear and brief information to mothers concerning the raising of babies; (2) to show to mothers the state is interested in them and their babies; and (3) to secure better birth statistics. The first appropriation for this book was \$2,500 granted by the legislature of 1913. The second appropriation was for \$4,000 granted by the legislature of 1915.

The State Board of Health sends out annually 100,000 circulars pertaining to the prevention and management of infectious and contagious diseases. The pamphlets distributed treat on consumption, typhoid fever, diphtheria, scarlet fever, measles, disposal of sewage without sewers, cholera infantum, and a special sick-room card which gives directions for the preparation and care of the rooms where infectious diseases are handled.

PUBLIC HEALTH

THE HARRISON ANTINARCOTIC LAW has been held constitutional by the United States District Court for the Western District of Washington. The decision relates to Section 8, which provides that: "Possession or control of the habit-forming drugs named in the act, by a person who has not registered and paid the tax, is unlawful, and such possession or control is made presumptive evidence of a violation of the act."

TRACHOMA IS NOT RARE in Indiana. It has now been reported from twelve counties and doubtless will be found in many others. So many cases have appeared in Indianapolis that the City Board of Health has decided to employ a visiting nurse to aid in the fight against the disease. Patients at the city dispensary who have this disease will be placed under nurse visitation; also children found suffering from it who are found in the schools.

THE DEATHS IN INDIANA numbered 35,930 (exclusive of stillbirths) in 1914. This is a death rate of 12.9 calculated on an estimated population of 2,779,467. The average death rate of the total United States registration area was 13.6, and in the registration states, including the District of Columbia, the death rate was 13.4. Kansas shows a death rate of 9.8, which is the lowest reported. The highest is North Carolina, with a death rate of 19. In this state the white death rate is 15.4; the colored, 25.8.

MADISON, INDIANA recently has passed a garbage ordinance which is up to date. It requires that every household, restaurant, etc., shall be provided with a galvanized iron garbage can with a good cover. The ordinance makes it unlawful to use wooden receptacles for garbage. The garbage can must be kept in a convenient place where the collector can readily get at it. Ashes, refuse, and trash shall be kept out of garbage and shall be separately collected in bins, boxes or galvanized iron cans.

THE VERMONT LEGISLATURE, at its last session, passed an act to prevent venereal diseases. This act makes it a crime for any person knowing himself to be afflicted with gonorrhea or syphilis to marry. Physicians are required to report cases of gonorrhea and the State Board of Health is required to pass rules and regulations for the sanitary management of gonorrhea.

The state of Vermont leads the van in this kind of legislation. If all the cases of gonorrhea in Indiana were quarantined with red flags some localities would look as if they were on fire.

CHEWING-GUM TRANSMISSION OF SCARLET FEVER is not often reported, but here is a case which occurred in the experience of Dr. H. M. Arthur, health officer of Hazelton. He says: "Mary E., aged 15, had scarlet fever and was quarantined October 13 and released November 6 apparently well. November 25 she took a piece of chewing gum from her mouth and gave it to her niece, aged 3, who developed scarlet fever November 30." It is probable that more disease and death is introduced through the oral cavity and transmitted from that cavity to the outer world than by any other method.

DR. L. D. ELEY, county health commissioner of Marshall County, who is a practitioner of long standing at Plymouth, has issued leaflets upon public health to the people. One set of leaflets is addressed to the teachers and the pupils of the county, and the other set to the people in general. They are well written in every instance, the subject being very practically presented. Dr. W. A. Thompson of Union County issued a public health book which the commissioners printed, and a copy was placed in every home in his county. Dr. Eley's idea is equally as good and will doubtless produce equally as good results.

A NEGRO PEST HOUSE HAS BEEN RECOMMENDED BY DR. J. A. LONG, health officer of Anderson. Recently during the presence of smallpox in Anderson, many cases were negroes and the white patients objected to being housed with them. Dr. Long advances this argument for a negro pest house, and further he says: "I have demonstrated it is cheaper to treat a negro in the pest house than in his own home." The State Board of Health suggests vaccination, which can be brought about by any municipality that is in earnest on the subject. Vaccination is the only scientific, practical and business way to handle smallpox.

SOUTH BEND plans a sanitary survey of the whole city. The South Bend Board of Health is not asleep. It actually works for the people and this is in contrast with some other city health boards in the state. No comprehensive sanitary survey has ever been made of South Bend. Only a few minor cities have conducted

such investigations. It is announced by Dr. Charles Bosenbury, the very efficient city health officer, that the survey will be done block by block. Of course, maps will be made. A special, all-time sanitary inspector has been appointed and provided with a Ford automobile to use in his work. South Bend already has a quarantine officer who looks after contagious diseases and disinfection and does some general sanitary inspecting.

DR. J. N. TAYLOR, health officer of Crawfordsville, who has always worked hard to secure accurate records of births and deaths and contagious diseases, has put forth an extra effort. He recently published an excellent article in the Crawfordsville papers calling the attention of the people and the medical fraternity to the importance of vital statistics. Dr. Taylor has had some difficulty in regard to illegibly written death and birth certificates. This deficiency he is trying to overcome by a proper tempered appeal to the physicians. The first thing to do in public health work is to collect accurate vital statistics. This is thoroughly understood by Dr. Taylor, and the good work he is doing will doubtless be appreciated by the people he serves.

SMALLPOX in a court room makes an interesting item. Recently Walter French, a bartender, was arraigned in an Evansville court for having violated the quarantine regulations by entering the home of Henry Brown, who was under smallpox quarantine. The deputy prosecutor in the court continually demanded to know why the health officer brought the prisoner, who had been exposed to smallpox, into court. "You are liable to put the whole court in the pest house," the prosecutor is charged with saying. "You expose me, too," the judge put in. Finally Dr. Macer, the smallpox physician, led the quarantine violator away and put him under quarantine to be tried later. We advise the prosecutor and the judge to be successfully vaccinated, and then they can try smallpox patients without the least fear.

STRYCHNIN AGREES WITH CALIFORNIA VALLEY QUAIL. Dr. C. C. Pierce of the U. S. Public Health Service, in cooperation with the California State Board of Health, has been conducting a campaign for the eradication of ground squirrels. This is because ground squirrels, like rats, may carry plague. Strychnin is used to destroy squirrels and is administered by

distributing poisoned barley around where squirrels are known to exist. It was found that quail could eat this poisoned barley in large amounts without being poisoned or killed thereby, and so some experiments were tried, and it was proved that California quail may be fed relatively large amounts of strychnin sulphate without showing toxic symptoms. The minimum lethal dose by subcutaneous injection is 4 milligrams per 100 gm. of body weight. The ground squirrel is destroyed by nine one-hundredths milligram per 100 gm. of body weight.

"THE GREATEST NEED is technically trained, all-time health officers" is the statement of Dr. Gray, health officer of Palo Alto. Continuing he says, "When we try to analyze public health conditions in small cities we find that little information can be obtained due to a lack of properly kept records. The average health officer not only has no satisfactory records; he hasn't even a satisfactory idea of the real needs of his community or a concrete plan of what he intends to do. The reason for this unfortunate state of affairs is that our health officers are usually practitioners of medicine, and give only a small part of their time to public health work and are more concerned with their private practice than the public welfare." It is as plain as the nose on one's face that professional, all-time health officers only are able to enforce the law and really look after the public health.

DR. PAUL BOWERS, physician in charge of insane criminals at the Indiana State Prison, estimates that 70 per cent. of the prisoners at that institution are defective. Not a few are feeble-minded, about 200 are insane and a score or more potentially insane. The prison contains epileptics and "border-liners." Dr. Bowers says it is his belief there is little hope of reforming 50 per cent. of the older criminals because of their weak mentality. Dr. Bowers further states that the judges in trying and sentencing criminals give too much attention to books and too little to the men before them. The insanity problem is wholly a medical problem and the criminal problem is largely a medical one. The pauper problem is entirely medical and the poverty problem is largely medical. When the business men of the state finally realize these truths they will support health movements which will lower taxes and benefit the moral and intellectual status of the state.

Dr. M. J. Rosenau, formerly superintendent of the Hygienic Laboratory of the United States Public Health Service, and at present Professor of Hygiene in the Medical Department of Harvard University, says, "It may be a surprise to my readers to learn that hygiene is included as a major subject in the curriculum of only three medical schools in this country, namely, the University of Pennsylvania, University of Michigan and Harvard. The teaching of hygiene has become exceedingly difficult on account of the widening scope of the subject including preventive medicine, sanitary engineering, vital statistics, epidemiological and industrial hygiene and public activities generally. It has become necessary to establish special schools with graded courses to meet the demand of trained men to become public health officers. It is slowly becoming recognized that the training received for an M.D. degree, even in our best schools, does not fit a man for public health work. Sanitation and hygiene has become a separate profession."

THE all time health officer and his extra usefulness is illustrated by some work recently done by Mr. A. W. Hedrich, who bears the title of chemist and inspector to the City Board of Health of East Chicago. This City Board of Health has a layman for chairman—the Hon. James McQuaid. Mr. Hedrich, the all-time health officer, has been doing remarkable work and has lately conducted an unusual public health investigation. There was an outbreak of diphtheria in East Chicago which was very serious. Of the sixteen cases reported in East Chicago in October, Mr. Hedrich found that six took milk from one of the four dairies in Indiana Harbor. At the dairy he learned that one driver, Mr. Noran, delivered milk at all of the six houses. A culture was taken from Mr. Noran's throat and nose as well as the other employes, and the surprising discovery was made that not Noran, but a man named Gianinni, whose duty it was to fill and cap bottles with a machine was the carrier. Gianinni did not handle the milk before it was bottled. He simply capped the milk after it was bottled. A separate culture from Gianinni's nose showed the nasal cavity carried infection. The patient said he had not had a sore throat since one year ago. At that time he went to a physician in Chicago who examined him, told him to quit smoking and keep his bowels open. He does not remember having associated with any one having diphtheria or sore throat since that time. Other evidence

seems to warrant the conclusion that Gianinni has chronic nasal diphtheria. This diphtheria carrier has at this writing, (November 12) been relieved of his work, placed under quarantine and everything possible is being done to separate him from his infection. The inference seems reasonable that Mr. Hedrich has very skilfully traced down the cause or at least the most important cause of the diphtheria epidemic with which he had to deal. The all-time health officer is best fitted for public health work.

SOCIETY PROCEEDINGS

INDIANA STATE MEDICAL ASSOCIATION
Treasurer's Report

EXHIBIT "A"

SUMMARY OF TREASURER'S REPORT	
Balance on hand, Jan. 1, 1915.....	\$3,122.38
Received from county societies. (See Exhibit "C" for details.).....	5,250.00
Received from Exhibits annual session....	346.00
	\$8,718.38
Disbursements. (See Exhibit "B" for details and "D" for analysis.).....	\$5,679.04
Balance on hand Jan. 1, 1916.....	\$3,039.34

EXHIBIT "B"

Detailed statement of disbursements of Charles N. Combs, treasurer, Indiana State Medical Association, for the fiscal year ending Dec. 31, 1915. Each check issued has a serial number to correspond with the serial number on the voucher which it pays and each voucher consists of an itemized bill attested correct by the secretary and president and ordered paid by the auditing committee of the council. (Permanently filed with canceled check.)	
This report necessarily contains the checks issued by former treasurer, Dr. D. W. Stevenson, prior to Oct. 1, 1915, and those vouchers were numbered to correspond with his check number.	
1915	
Jan. 2—Check and voucher No. X245, Dr. G. G. Eckhart, councilor, expenses, 1914.\$	4.00
Feb. 9—Check and voucher No. X246, THE JOURNAL, subscriptions for members Nos. 1-2027, inclusive.....	1,520.25
Feb. 9—Check and voucher No. X247, medical defense committee fees members Nos. 1-2027, inclusive.....	1,520.25
Feb. 13—Check and voucher No. X248, The Viquesney Co., Terre Haute, security safe and supplies.....	145.75
Feb. 24—Check and voucher No. X249, The Moore-Langen Printing Co., Terre Haute, to binding 1914 volume THE JOURNAL	2.75
March 8—Check and voucher No. X250, THE JOURNAL, subscriptions for members Nos. 2028-2294, inclusive.....	200.25

March 8—Check and voucher No. X251, Medical Defense Committee Fees Members Nos. 2028-2294, inclusive.....	200.25	Oct. 11—Check and voucher No. 11, Sentinel Printing Co., Indianapolis, badges.....	5.60
March 23—Check and voucher No. X252, Terre Haute Printing Co., Terre Haute, printing	8.75	Oct. 11—Check and voucher No. 12, Standard Sign Co., Indianapolis, signs.....	5.50
March 26—Check and voucher No. X253, Cleary & Bailey, Fort Wayne, printing stationary, membership cards, expressage, etc.....	114.42	Oct. 11—Check and voucher No. 13, Dr. David Ross, Indianapolis, man for manipulating lantern	5.00
April 6—Check and voucher No. X254, THE JOURNAL, subscriptions for members Nos. 2295-2441, inclusive.....	110.25	Oct. 11—Check and voucher No. 14, Terre Haute Printing Co., Terre Haute, to printing and rebinding check book.....	1.50
April 6—Check and voucher No. X255, Medical Defense Committee Fees members Nos. 2295-2441, inclusive.....	110.25	Oct. 11—Check and voucher No. 15, Hampton Printing Co., Indianapolis, to 400 programs (scientific demonstrations).....	8.70
May 6—Check and voucher No. X256, THE JOURNAL, subscriptions for members Nos. 2442-2490, inclusive.....	36.75	Oct. 11—Check and voucher No. 16, Dr. Goethe Link, Indianapolis, incidental expenses, Committee on Exhibitors.....	20.00
May 6—Check and voucher No. X257, Medical Defense Committee Fees members Nos. 2442-2490, inclusive.....	36.75	Oct. 11—Check and voucher No. 17, Claypool Hotel, Indianapolis. Thirteen exhibit rooms, 1915 session.....	150.00
June 5—Check and voucher No. X258, THE JOURNAL, subscriptions for members Nos. 2491-2523, inclusive.....	24.75	Oct. 11—Check and voucher No. 18, Dr. C. C. Bass, New Orleans, honorarium to cover actual expenses from New Orleans.	75.00
June 5—Check and voucher No. X259, Medical Defense Committee Fees members Nos. 2491-2523, inclusive.....	24.75	Oct. 14—Check and voucher No. 19, Wm. W. Hampton, Indianapolis, balance due on account printing for questionnaire.....	18.04
July 10—Check and voucher No. X260, THE JOURNAL, subscriptions for members Nos. 2524-2553, inclusive.....	22.50	Nov. 2—Check and voucher No. 20, Dr. A. E. Bulson, Jr., Fort Wayne, expenses midwinter meeting 1915.....	6.80
July 10—Check and voucher No. X261, Medical Defense Committee Fees members Nos. 2524-2553, inclusive.....	22.50	Nov. 2—Check and voucher No. 21, Dr. J. H. Weinstein, councilor, expenses 1914.....	6.98
Aug. 7—Check and voucher No. X262, THE JOURNAL, subscriptions for members Nos. 2554-2568, inclusive.....	11.25	Nov. 2—Check and voucher No. 22, Dr. G. G. Eckhart, councilor, expenses 1914.....	3.85
Aug. 7—Check and voucher No. X263, Medical Defense Committee Fees members Nos. 2554-2568, inclusive.....	11.25	Nov. 2—Check and voucher No. 23, Dr. G. W. H. Kemper, councilor, expenses 1914 .....	.35
Aug. 21—Check and voucher No. X264, Dr. J. G. Jones, councilor, expenses 1914....	9.25	Nov. 11—Check and voucher No. 24, Edna Bigelow, Chicago, stenographer 1915 session	116.45
Aug. 21—Check and voucher No. X265, American Medical Association, Chicago.	185.13	Nov. 11—Check and voucher No. 25, M. B. Osburn, St. Louis, stenographer 1915 session	75.25
Aug. 28—Check and voucher No. X266, Dr. Charles N. Combs, for postage and envelopes for questionnaire. See check No. 19 for balance.....	110.80	Nov. 11—Check and voucher No. 26, F. E. Dillan, Indianapolis, stenographer for general and medical sessions, 1915.....	100.00
Oct. 2—Check and voucher No. 1, THE JOURNAL, subscriptions for members Nos. 2569-2596, inclusive.....	21.00	Nov. 11—Check and voucher No. 27, American Medical Association, Chicago, programs (1915 session).....	25.00
Oct. 2—Check and voucher No. 2, Medical Defense Committee Fees members Nos. 2569-2596, inclusive.....	21.00	Nov. 11—Check and voucher No. 28, P. E. Allen, Terre Haute, guarantee treasurer's bond for \$5,000.....	17.50
Oct. 4—Check and voucher No. 3, Dr. C. N. Combs, honorarium, 1915.....	300.00	Nov. 11—Check and voucher No. 29, Edith Reinking, Terre Haute, stenographer to secretary from Oct. 1, 1914, to Oct. 1, 1915	60.00
Oct. 4—Check and voucher No. 4, Dr. C. N. Combs, secretary's incidental expenses, Oct. 1, 1914 to Oct. 1, 1915.....	55.75	Nov. 11—Check and voucher No. 30, Hampton Printing Co., Indianapolis, printing.	1.75
Oct. 11—Check and voucher No. 5, The Viquesney Co., Terre Haute, printing..	2.75	Nov. 2—Check and voucher No. 31, THE JOURNAL, subscriptions for members Nos. 2597-2606, inclusive.....	7.50
Oct. 11—Check and voucher No. 6, Dr. F. W. Gregor, Indianapolis, telephone bills, legislative com., 1915.....	14.33	Nov. 2—Check and voucher No. 32, Medical Defense Committee Fees members Nos. 2597-2606, inclusive.....	7.50
Oct. 11—Check and voucher No. 7, Whitehead & Hoag Co., Newark, N. J., badges, etc.	28.75	Dec. 3—Check and voucher No. 33, THE JOURNAL, subscriptions for members Nos. 2607-2610, inclusive.....	3.00
Oct. 11—Check and voucher No. 8, Gertrude Steffen, Indianapolis. Abortion committee expense	2.61	Dec. 3—Check and voucher No. 34, Medical Defense Committee Fees members Nos. 2607-2610, inclusive.....	3.00
Oct. 11—Check and voucher No. 9, Dr. O. B. Nesbit, councilor, expenses.....	21.00	Dec. 15—Check and voucher No. 35, The Viquesney Co., Terre Haute, printing..	18.75
Oct. 11—Check and voucher No. 10, Dr. G. W. H. Kemper, Necrology Committee and council expense.....	13.48	1916	
		Jan. 1—Check and voucher No. 36, THE JOURNAL, subscriptions for members Nos. 2611-2625, inclusive.....	11.25

Jan. 1—Check and voucher No. 37, Medical Defense Committee Fees members Nos. 2611-2625, inclusive.....	11.25
Total	\$5,679.04

EXHIBIT "C"

Detailed list of receipts from county societies for the fiscal year 1915:

Marion	\$ 626	Putnam	42
Allen	202	Boone	40
Vigo	182	Clay	40
Lake	168	Monroe	40
Vanderburg	158	Rush	40
Madison	124	Spencer	40
St. Joseph	120	Adams	38
Delaware	116	Clinton	38
Tippecanoe	116	DeKalb	38
Elkhart	114	Dubois	38
Grant	108	Hancock	38
Wayne	104	Jasper-Newton ..	38
Knox	94	Jennings	38
Laporte	94	Johnson	38
Cass	86	Posey	38
Huntington	72	Pike	36
Montgomery	72	Ripley	36
Fountain-Warren ..	68	Steuben	36
Henry	68	Decatur	34
Sullivan	66	Blackford	32
Randolph	64	Clark	32
Howard	62	Fulton	32
Noble	60	Morgan	32
Hendricks	58	Owen	32
Carroll	56	Tipton	32
Floyd	56	Whitley	32
Wabash	56	Orange	30
Miami	54	Shelby	30
Wells	54	Benton	28
Daviess	52	Warrick	28
Gibson	52	Fayette	26
Parke-Vermillion ..	52	Martin	20
Kosciusko	50	Perry	20
Marshall	50	Switzerland	18
Dearborn-Ohio ..	48	White	18
Jackson	48	Crawford	16
Lawrence	48	Harrison	16
Jefferson	46	Union	16
Bartholomew	44	Starke	14
Porter	44	Franklin	12
Greene	42	Pulaski	10
Hamilton	42	Washington	10
Jay	42	Scott	8
Lagrange	42		
Total	\$5,250		

EXHIBIT "D"

Analysis of expenditures for two years:

	1914	1915
Journal subscriptions.....	\$1,927.50	\$1,968.75
Medical defense fund.....	1,927.50	1,968.75
Printing and stationery.....	186.85	148.92
Councilors' expenses.....	49.30	65.71
Postage and incidentals.....	62.52	73.25
Secretary's honorarium.....	300.00	300.00
Annual session	526.35	822.78
Rent	63.50	150.00
Stenographers	340.25	351.70
Badges	62.50	34.35
Programs	35.00	35.45
Committees	10.00	145.78
Speakers		75.00
Miscellaneous	15.10	30.50
Equipment safe cabinet.....		145.75
Dr. Kemper's index.....		185.13
Total	\$4,980.02	\$5,679.04

It will be noticed that in addition to the last two items the increased expenditure was due to the fact that the annual session cost \$300 more this year. However, this difference is reduced when we remember that the exhibits brought in \$161 more this year. The net excess of \$139, due mostly to the cost of the speakers, was most certainly justified by the increase in the attendance. Since the last two items will not occur this year, we should be able to save about \$300 for the general fund.

Report of Secretary for the Fiscal Year ended
Dec. 31, 1915

Membership Jan. 1, 1915.....	2,570
Deceased	33
Resigned	2
Expelled	2
Removed from state.....	35
Dropped for nonpayment of dues.....	141
New members 1915.....	262
Membership Jan. 1, 1916.....	2,625

There are two items in this tabulation of which we are especially proud. In addition to gaining fifty-five members over last year, we have the largest membership and the smallest number of delinquents of any of the five years during which the present secretary has held office. In spite of this continuous growth in membership we have not yet reached the maximum attained one year when we used to have the annual dues \$1. The first year the dues were raised to \$2, the membership fell off 200. A large number of the county societies survived this rude financial shock. The physicians in the following counties evidently resented the indignity of asking them for almost 10 cents a month more in order to furnish them with efficient medical defense and the best state journal in the Union, or at least the membership has never totaled what it did under the \$1 per annum taxation: Adams, Allen, Boone, Clay, Clinton, Elkhart, Fulton, Gibson, Hamilton, Jennings, Miami, Monroe, Owen, Perry, Posey, Pulaski, Ripley, Scott, Spencer, Steuben, Washington and White. The other counties have since that time passed the mark, and a gain for this coming year will be assured if the above-mentioned counties will do likewise. We are still hoping to reach the 3,000 mark, which we believe to be about the maximum of efficiency in this state.

Until the councilor reports are received, we cannot speak concerning the activities of the various counties, but memberships have been received from every county in the state with the exception of Brown County. It is not at all likely that a separate organization will ever be effected in this county, but a pride in having every county in the state represented should prompt one of the neighboring counties to succeed in allowing Brown County to affiliate with it.

Under Exhibit "C" of the treasurer's report will be found the amount of money received from each county. Dividing this number by two will give the number of members enrolled for the year.

CHARLES N. COMBS, Secretary.

INDIANAPOLIS MEDICAL SOCIETY

Central Insane Hospital, Nov. 23, 1915

Meeting was called to order by the president. Drs. E. A. Willis, Eugene Buehler and Joel Whittaker were elected to membership.

Dr. A. E. Sterne read a paper on "The Psychology of Fear."

DISCUSSION

DR. C. F. NEU: Dr. Sterne brings to our attention the fact that the modern view of mind is that it is a product of brain cell activity as a reflex to the impulses acting on it. I do not believe there can be any doubt but that philogenetically and ontogenetically we are more or less a fixed quality. Regarding the element of fear. Fear is a product of painful impressions of stimuli that act on us. As our sphere enlarges, the quality of fear enters more into our make-up. The paper illustrates the fact that the profession is beginning to take a more active part in the study of mental and nervous diseases.

DR. HUTCHINS: Fear is an emotional disturbance, but may be caused or relieved by intellectual processes. It is the cry of alarm, a useful emotion in certain limits, closely associated with self preservation. The intellect working through the cerebrospinal system, finds the organism fit and prepared for the service by the philogenetically older sympathetic system, influenced by instinctive fear. The cranial autonomic system is concerned with the saving and conservation of the body, while the sympathetic has to do with its use and expenditure. Fear acting through the sympathetic raises blood pressure, increases liver sugar, adrenalin and clotability. The organism is thus tuned for action, metabolites removed, and the threshold of nervous irritability kept at high potency. Imaginary or continuous fear through constant stimulation eventually causes exhaustion, interferes with digestion and the general anabolism necessary for the repair of the body. The uniformity of expressions and attitudes during fear, argues a definite related mechanism.

Drs. M. A. Bahr and F. C. Potter gave a clinical and pathological report of a case of transverse syphilitic myelitis. Dr. Bahr: Patient a female, aged 40, presented symptoms as would be represented by a lesion or lesions involving a vertical or cross section of the cord in the middle and lower dorsal, and lumbar regions; later symptoms of ascending involvement and for a week previous to her death also symptoms suggesting an involvement of the cerebrospinal meninges. A positive clinical history of syphilis could not be ascertained. She expressed herself as if her "lower limbs were falling asleep." Also had some abdominal sensory manifestations as band-like sensations and as if there was constriction around her waist. Motor symptoms were manifested in about two weeks. Patient began to complain of weakness in her lower extremities, and a week later was confined to her bed because of inability to walk. Trophic symptoms were next noted which were evidenced by a breaking down and rapid destruction of tissue wherever there was exerted the slightest pressure as over the sacrum and heels. Loss of control of the bladder and bowels were also noted about this time. The mental condition on admission was one of mild confusion. Patient had a septic appearance as her tongue was badly coated, her breath foul, her features pinched, and temperature 102.5 F. At this time there was noted

a large decubitus over the sacrum measuring 9 by 5 inches in diameter and extending to the bone. Examination of the blood revealed a positive Wassermann reaction and also a positive Landau's color test. Blood also showed a hemoglobin estimation from 34 to 48 per cent., erythrocyte count from 2,960,000 to 3,030,000 and a leukocyte count from 21,300 to 24,200. The polymorphonuclear count ranged from 79 to 84 per cent. In consideration of this leukocytic count the secondary infection of the decubitus must be taken into consideration. The lower extremities presented a loss of the sensibility to pain, absence of patellar reflexes, but no clonus or Babinski phenomena. Six days previous to the patient's death she presented a paralysis of the left side of the face, which disappeared the following day. Following this attack the patient became delirious, and two days later presented a similar paralysis of the face with a marked dilatation of the left pupil, followed by deep coma. The entire course of the disease extended over about four and a half months, and from the beginning was steadily progressive with the apparent beginning lesion, or rather the prominence of the clinical symptoms being confined to the upper and middle dorsal regions.

DR. POTTER: Necropsy showed the following: Head: chronic pachymeningitis; general chronic leptomeningitis; edema of the subarachnoid space. Spinal cord; necrosis of the sacral vertebrae; chronic pachymeningitis with slight internal hemorrhagic pachymeningitis; chronic leptomeningitis with plaques calcification; degeneration of the anterior horn cells and early degeneration of the posterior and lateral columns; round celled infiltration of pia. Heart: eccentric hypertrophy and dilatation; specific mesaortitis. Infarct of right lung. Gumma of spleen.

DR. D. B. HAWKINS presented a case of pellagra: Patient male, aged 54, admitted Nov. 9, 1915. Patient was poorly nourished and on dorsal surface of the hands and wrists presented a scaly, thickened and pigmented squamous erythematous condition. The under surface of the scales was red and fissured. The palms of the hands and between the fingers was a pinkish hue. Mental condition of patient on being received was as follows: He was well oriented and answered questions rather relevantly. At times, however, he would become confused, was rather apprehensive and would talk to himself a great deal. From the time of his admission patient grew gradually weaker both mentally and physically. On November 2 patient began having convulsions of a tonic character. Especially was this noted in the upper extremities and in the muscles of the face, although the lower extremities were also involved. Tremors of the tongue developed and patient found he was unable to talk. Loss of consciousness developed. The eyes became glaring and staring and the cheeks sunken. Pulse 150, temperature 99 and respirations 25. The patient had been a farmer by occupation and was admitted from Vermillion county, which is across the Illinois line and from which a number of cases have been reported. His habits have always been good and there was no history of intemperance. Wassermann reaction was negative. Hemoglobin estimation 100 per cent., erythrocyte count 5,870,000, leukocyte count 10,600, and the polymorphonuclear estimation from 60 to 79 per cent.

Dr. M. A. Bahr presented a case of scleroderma: Female, aged 50. Admitted to the Central Hospital June 27, 1908. Patient presented a sclerodermatous lesion in the generalized form of the lower extremities. The upper extremities and the face were unimpaired. The patient had a neuropathic constitution which is of such striking frequency in these cases that it cannot be overlooked. Her father had died in this institution. The condition had developed while in the institution and was of about six months' duration. There was no history of any infectious disease, traumatism, exposure to cold, rheumatism or syphilis, which are so frequently contributed as etiologic factors. The first symptoms noted were a slight erythema with a formation of a few blebs. Several spots simulating an urticaria were also demonstrated. Later the skin became stiffened and drawn and rather scaly on its surface. Atrophy of the subcutaneous structures was quite evident and the skin became thin and presented a glistening white cicatricial appearance. Later the characteristic hide-bound descriptive title was evident. In consequence of this the joints became rather fixed and very much limited in motion. Patient presented a negative Wassermann reaction. Hemoglobin estimation of 39 per cent., and a leukocyte count of 4,700. The polymorphonuclear estimation was 48 per cent. Meeting adjourned.

Hotel Washington, Nov. 30, 1915

Meeting was called to order by the president.

PROGRAM

Dr. Frank B. Fisk read an abstract of A. J. Hinkleman's article on the bacteriology of the so-called intestinal influenza, (winter cholera): The striking symptom complex, the absence of fever, the short duration of the disease, the close resemblance of the condition to acute chemical or animal poisoning, the suddenness of the outbreak and the large number afflicted make this article especially interesting. Hinkleman, through considerable work during the Galesburg epidemic succeeded in isolating the bacteria which he named the bacilli of winter cholera from the stools of many patients that suffered with the disease, from the city water and from the sewage of the town. He describes the bacteria under both parasitic and saprophytic existence and publishes his experiments to show the effect of the organism. He finds the organism after a long saprophytic existence is of low virulence and that it produces the disease only after an incubated period of ten days, while those that had become sensitized produced symptoms in about twenty-four hours. He shows that the saprophytic organism after becoming sensitized showed a marked parallel in action when compared with the bacteria taken from the stools of individuals suffering with the disease on injection under like conditions. In conclusion he feels justified in claiming a definite organism for a definite disease and feels that his experiments justify his claims. He further describes a vaccine and the effects of same which are not unlike the symptoms produced by the injection of the living organisms. He states that the bacteria is one of sewage and that when found in water it shows contamination.

Dr. Amos Carter of Plainfield, Hendricks county, read a paper on "Vaccines and Serums."

Dr. Carter's paper showed the progress laboratories have made since vaccines and serums came into use, (inasmuch as he has been a general practitioner over thirty-five years and kept abreast of the times during that period Dr. Carter could write on such a subject aptly). The paper showed which ones the author had used with satisfaction and those with dissatisfaction.

DISCUSSION

DR. MORGAN: This discovery in Galesburg adds another bacillus. Winter cholera is rather rare in this country. It is prevalent in eastern countries where citizens become accustomed to the purge producing water. Dr. Fisk's report gives such a vivid description of the organism producing the epidemic in Galesburg that similar research has been carried out in Indianapolis relative to our recent epidemic. Food was first thought to be the cause. Pork was next suspected, after which the water had its turn. An occasional colon bacillus was found, however plating the water showed no cultures. This showed that bacterial contamination was not the probable cause. A search for some chemical resulted negatively. Examinations of urine and feces from several patients likewise gave no clue. We have made no discovery that would lead us to give the cause of our recent epidemic.

DR. SHIMER: A serum once meant an antitoxin but now it refers to the serum of the blood of an immunized animal. Antitetanus toxin and antidiphtheritic toxin have been more successful than others. Metchnikoff produced a sensitized vaccine and injected it into monkeys but could not protect their bodies by injecting dead bodies. Serums do not produce immunity.

Dr. Brayton commended Dr. Carter's paper.

DR. DODDS: Bacterins and sera for the cure of diseases as given us by various pharmaceutical houses disturbs us mentally. A bacteria is a whip. We are likely to become overenthused. They act like miracles sometimes and again they act badly. I believe autogenous vaccines act better generally than stock vaccines or serums.

MR. BURRAGE: Vaccines are good in emergencies and are often given too late by physicians. This gives them a bad reputation. We use diphtheritic antitoxin early and why not any other?

Dr. Fisk in closing stated that the present sickness could hardly be caused by a chemical.

Dr. Shimer asked for blood samples for cultures.

DR. KITCHEN: There have been thousands of cases in the present epidemic. This epidemic has spread over nearly every part of the city. We are in the dark and this investigation should be continued. We desire more light on this important subject.

Severance Burrage stated laboratories were still working on the case.

Dr. Morgan stated one death has been reported from the recent malady.

Dr. Willis mentioned the fact that the water company suggested boiling the water. The water was changed before the board of health began analyzing water which could preclude any satisfactory findings.

The society extended a vote of thanks to Dr. Carter for his very interesting paper.

Attendance 90. Adjourned.

ALFRED HENRY, Secretary.

THE MUNCIE ACADEMY OF MEDICINE

Meeting of November 19, 1915

Dr. B. R. Kirklin read a paper on "The Etiology and Symptomatology of Bronchial Asthma," saying: The principal pathologic conditions exhibited by an attack are spasm of the bronchial and other respiratory muscles, especially the diaphragm, and turgescences, edema and hypersecretion of the mucous membranes of respiratory tract resulting in extreme emphysema of the alveoli. Heredity, particularly of neurotic taint, plays an important part. Gout, neuralgia and migraine are frequently mentioned in the history. No disease offers a stranger conglomeration of exciting causes. The very close relationship existing between hay fever, nasal polypi, and other affections of the nose, and asthma have attracted much attention. The inhalations of certain odors or dusts induces the attack, or the smell of certain flowers or new hay, or the dust of curried horses, the dust from flour mills and threshing machines, etc. Observations on animals called attention to facts of the effects of horse serum injections on persons suffering from "horse asthma," alarming symptoms following; therefore, it has been suggested that bronchial asthma might be a phenomenon of protein sensitization or anaphylaxis. Clinically, asthma produced by these known proteins differs in no respect from the more common form of the disease known as spasmodic or bronchial asthma, except that in the latter the identity of the foreign protein causing the reaction is unrecognized. The development of chronic rhinitis and sinusitis by the recurrence of vaso-secretory disturbances in cases of recurring hay fever is a logical sequence and has been commented on by many writers. Finally, it should be borne in mind that the atrium or focus through which a foreign protein may gain access to the animal body may be varied. That is, the avenue of entrance may be parenteral, as an infective focus in the nose, throat, mouth, abdominal cavity, etc., or it may be through the digestive tract. Most attacks aside from those directly induced by the inhalation of such substances as we have mentioned begin in the night. The resemblance in this regard to the attacks of spasmodic croup is interesting. The dyspnea increases rapidly until it is extreme, and a troublesome paroxysmal cough is experienced. Pallor and great anxiety are expressed in the face. Cyanosis of the ears, lips and face develops in the severe attacks. The respirations are slowed rather than hastened. The pulse is rapid, frequently a profuse sweat occurs, and the extremities become cold. Connected speech is impossible. After an interval of perhaps two hours, on the average, but with many variations from this, the patient, apparently on the verge of suffocation, finds his cough slightly more productive, a mucous sputum appears, and the dyspnea becomes less. He may drop to sleep and awake in almost his accustomed health in the morning.

Adjourned.

Meeting of Nov. 25, 1915

Regular meeting of Muncie Academy of Medicine was held in Muncie Y. M. C. A. Building Friday evening, November 25 and was called to order at 8:15 by President O. E. Spurgeon, M.D.

A quiz on the "Physiology of Respiration" was conducted by Dr. G. R. Andrews.

A paper on "Asthma" was read by Dr. W. W. Wadsworth, who had the questionable advantage over the other members present in having a personal knowledge of his subject; and he discussed it from the point of view, or rather the feeling point, of the patient. He believes the majority of cases are auto-toxic in type and are almost never found in a patient who is not constipated. Dr. Wadsworth described symptoms and named many things used in his efforts to obtain relief. He spoke very highly of vapor baths or hot packs. Because of danger of habit formation he condemned morphin, particularly in those who had access to the drug.

Dr. O. E. Spurgeon made a brief summary on diagnosis and treatment of asthma, saying: Dyspnea of asthma is almost characteristic of asthma. Inspiration is rather quick and full and without difficulty. Expiration is prolonged and difficult. The patient may or may not recognize that his difficulty is in getting rid of the inspired air. Râles are most sibilant and sonorous. Râles change in quality, pitch, loudness and location. They are audible all over chest and are prolonged and intense during inspiration. The relief of the paroxysmal dyspnea is very imperative. In my experience, somewhat limited, I have usually found the use of three drugs, one or the other of which gives relief quite promptly. Morphin and atropin used hypodermatically is perhaps the most universally used and this is often all that is necessary. The solution of adrenalin chlorid has given me quickest results, and so far as I know is not harmful. Five drops every fifteen minutes, or more frequently, usually affords relief within a short time. The use of lobelia has given me excellent results. If there is any place in medicine for lobelia according to the authorities of the regular school, it is in the treatment of asthma. Properly used it certainly is a valuable drug in this disease. Five drops of the normal tincture given every fifteen minutes during the acute attack and less often in the sub-acute attack usually is a great relief to the patient.

At this meeting Dr. I. N. Trent was elected society critic to serve a term of one year.

Adjourned.

H. D. FAIR, Secretary.

FORT WAYNE MEDICAL SOCIETY

Meeting of Oct. 5, 1915

The Fort Wayne Medical Society met in regular session at the assembly room of the Court House, twenty-seven members being present. The meeting was called to order by the president. The minutes of the two preceding meetings read and approved as read.

Dr. Bud Van Sweringen reported a case history of a patient with tuberculous epididymis and testicle, in which the testicle and epididymis was removed. The same condition a few years ago which occurred in the opposite testicle necessitated its removal.

DISCUSSION

DR. BRUGGEMANN: One thing in connection with removal of the testicle and that is the preservation of a portion of the secreting substance. We know the testicle has an internal secretion which has a great deal to do with the economy. An operation of this kind has been devised by Murphy who has done a great deal of work along this line.

Dr. McCaskey exhibited a polygram from a case reported last week. Dr. McCaskey also reported a case history of a patient suffering from katatonia.

DR. PULLIAM: These cases are most often cases of dementia praecox. We see cases like this in the asylum quite often. The blood picture is due to intestinal stasis. Sometimes a leptomeningitis is present. These patients become maniacal if they are restrained. I have seen necropsies on cases of this kind where the conditions as before mentioned were present.

DR. MCCASKEY: I would be inclined to think from what I know of leptomeningitis and from the laboratory findings in these cases that we should have had an abnormal spinal fluid if leptomeningitis had been present.

DR. EDLAVITCH: I am inclined to disagree with Dr. Pulliam as to the pathology of dementia praecox. The pathology of this condition has not been worked out, but you cannot have an inflammation of the brain and cord and their coverings without an increase in the cell count and a globulin in the spinal fluid.

Paper of the evening, "General Peritonitis," Dr. E. J. McOscar.

DISCUSSION

DR. B. VAN SWERINGEN: I have had occasion to talk of many of the points brought out in this paper before this society so that my opinions on this subject are pretty well known. I am opposed to the opening of the bowel to allow of deflation and drainage of its contents, for I believe the tympany is a conservative process of Nature and opening the bowel in this manner only serves to open up new atria of infection. You are compelled to milk the bowel to allow the gas to escape, thus adding to the danger of infection. I think that mechanically this gas prevents the absorption of toxins. I do not think that Fowler's position adds so materially in the drainage.

DR. BRUGGEMANN: I think that most people think that the thing to do in suppurative peritonitis is to open the abdomen, establish drainage and get out as quickly as possible. I do not agree that tapping the bowel in every case of general peritonitis is good practice. One class of cases in which it is indicated is in paralytic ileus. The loop of bowel which is the seat of the infection may be opened and drained, thus relieving the toxins locked up in this section of the bowel. In giving anything by mouth for the first few days following the operation you simply serve to increase the nausea and vomiting.

DR. PORTER: Many cases called general peritonitis are not general peritonitis. Many of these cases are simply soiled peritoneum. I have a case of gangrenous appendicitis now which had fluid in the peritoneal cavity, flakes of lymph on the bowel. A forty-eight-hour drainage handled this infection. This was not a general peritonitis but a soiled peritoneum. It is true the tympany splints the bowel and opium aids in this splinting. I know that I have saved many cases of general peritonitis by opening the bowel, allowing the gas to escape and thereby relieving the tympany which was causing the impairment of respiration and circulation. I think that the Fowler position aids in drainage and in keeping the absorption of toxins at a minimum. If you have a case of general peritonitis, Fowler's position will not help a whole lot, but in a case of soiled peritoneum it will aid in drainage. I have learned to give my patients

following operation for general peritonitis, fluids just as soon as the stomach will take and retain them. If a patient is retching and the stomach is empty, a drink of water, or several drinks of water, will often relieve the patient by washing out the stomach, which is an excellent thing in these cases.

DR. GOULD: I should like to say just one word in relation to proctoclysis, water is absorbed better than normal saline solution.

DR. WEAVER: It is an established fact that water is absorbed better than normal saline solution. Many of these cases will be made more comfortable if the stomach is washed out early and much of the retching and vomiting will be relieved better than by giving water by mouth. The practice of multiple incisions in the gut to relieve distensions should be condemned. It certainly opens up new avenues of infection. Fowler's position aids in the handling of toxins.

DR. MCCASKEY: Water is never absorbed by the stomach. In the duodenum some absorption takes place, which is increased until the colon is reached, where the absorption of water is most marked. This point should be a strong argument in favor of proctoclysis. There is a selective action on the part of the epithelial cells of the colon to absorb water.

DR. MCOSCAR: The objection to opening the bowel because the infection is outside the bowel and the tympany is a conservative process is very good, but any one who has seen a distended bowel which is dark from stasis of the circulation change in color and in general condition of improvement following the relief of this distention by puncture, cannot help but believe that it is a good thing. The leakage from properly sutured openings made in the bowel for the purpose of deflation and drainage should be very slight in competent hands. Water given by the mouth does not produce peristalsis in the intestine and for this reason cannot do harm.

Bills from the Flick Floral Company for 75 cents and from Miss Gertrude Wortman for \$29.22 were allowed.

The president announced the appointment of Drs. Bulson, Drayer and Porter as a committee of arrangements for the coming meeting of the State Medical Society.

Meeting adjourned.

Meeting of Oct. 12, 1915

The Fort Wayne Medical Society met in regular session at the Assembly Room of the courthouse with twenty-eight members present. The meeting was called to order by the president. The minutes of the preceding meeting were read and approved as read. Dr. Budd Van Sweringen read Dr. A. J. Smith's article in the *Old Penn Magazine* establishing the priority of the use of ether as an anesthetic agent by Dr. Crawford Long. Motion carried that copies of this magazine be given into the custody of the secretary to file.

Dr. Bulson reported the following clinical case:

A man was breaking coal for the fire when a piece broke off, striking him in the eye. The eye showed a puncture wound in the ciliary region. Hemorrhage occurred and obscured the vision of the interior of the eye for foreign body. Roentgen ray did not show the coal. Hernia of the iris occurred and in liberating the iris the piece of coal was extracted with it. The recovery so far is good. This patient was given

large doses of urotropin, and he attributes the lack of infection in the eye to its use. Bichlorid ointment was also used as a dressing.

DISCUSSION

Dr. Glock: It has been recognized that coal will not throw a shadow in the Roentgen ray. Glass is another substance which does not throw a shadow. The rule has been in localities where they have injuries from particles of coal striking the eye, to take out the eye. I think Dr. Bulson is to be congratulated on having been able to extract this body.

Dr. Duemling: The glass made in this country contains a great deal of lead and will throw a shadow on the use of the Roentgen ray when these pieces of glass are large. I have had no experience with small pieces.

Dr. Weaver: Glass in large pieces will throw a shadow but does not in small pieces. I have had little experience with small pieces of glass in the eye.

Dr. Porter: Most coal is not pure, and if it contains bits of other metal it will cast a shadow. If it is almost pure carbon it will not throw a shadow.

Dr. Glock: In a case I had of a man who was wearing glasses and was struck in the eye by a burr from a circular saw, a sliver of glass was removed from the eye which did not throw a shadow on the Roentgen ray. This sliver could be seen by the light from a magnifying glass.

Dr. Wallace: I took a picture of a glass catheter inserted into the bladder. A diamond will not cast a shadow unless it has a flaw.

The paper of the evening, on "The Use of Pituitrin in Medicine," was read by Dr. McArdle.

DISCUSSION

Dr. Beall: Pituitary substance is certainly mighty satisfactory to use in certain cases. I used this drug in one case of bronchial asthma with marked relief. In the second case that I attempted its use I thought the patient was going to die. She became pale, the bowels moved involuntarily and the pulse became intermittent.

Dr. Rothchild: I have had some very good experience and some very poor experience with pituitary extract. A hard-and-fast rule to be observed is that the head must be engaged and the cervix completely dilated. Never should it be used with a floating head. When administered prior to delivery it certainly aids in preventing postpartum hemorrhage because it aids in uterine tonus.

Dr. Glock: A series of experiments were done to find out if pituitary substance had any influence on the coagulation time of the blood, and it was decided that it had. Certainly, if this is true, it should aid in postpartum bleeding. In one-half dozen cases in which it was used following operations on the eye, it aided in stopping the hemorrhage.

Dr. Calvin: In a case of postpartum hemorrhage I could not see any effect with the use of pituitrin. In this case there are two generations and four individuals with a history of postpartum hemorrhage.

Dr. Porter, Jr.: It is a notorious fact that the different preparations of pituitary substance do not have the same effect, and preparations made by the same pharmaceutical houses vary from time to time. I have given 4 c.c. of one preparation without any

effect and 0.5 c.c. of another gave an immediate result. I do not agree with the statement that pituitrin should be used to save the time of the obstetrician as well as pain and shock to the mother. I think it is absolutely wrong to use any method of procedure for the purpose of saving the time of the obstetrician.

The application of Dr. Bartholomew of Van Wert for nonresident membership, acted on favorably by the board of censors, was presented. Motion was carried that the rules be suspended and the secretary cast the unanimous ballot of the society for membership. Ballot was so cast.

Motion was passed that the president appoint a committee of three members of the society on the fee that should be required of nonresident members. The president appointed Drs. Porter, Bulson and Calvin.

A report of the Committee on Insurance Schedules recommends the adoption of the following resolution. Motion carried:

The committee appointed to investigate the fee bill issued by the indemnity insurance companies, begs to report as follows:

An investigation of the fee bills issued by a number of indemnity companies shows that there is a tendency to make the amounts paid for services rendered less than the usual charges prevailing in this community. This is without question an attempt on the part of indemnity companies to determine the medical and surgical fees. This, we believe, will prove deleterious because it will result in poor mediocre service to the injured.

For this reason the committee recommends the adoption of the following resolution to-wit: The insurance companies, acting under the Workmen's Compensation Law, should pay for such medical and surgical services in compliance with the law which reads as follows:

"Section 26. The pecuniary liability of the employer for medical, surgical and hospital service herein required shall be limited to such charges as prevail in the same community for similar treatment of injured persons of a like standard of living when such treatment is paid for by the injured person."

This resolution was unanimously adopted by the Allen County Medical Society at the regular meeting, Oct. 12, 1915.

Motion that the secretary be instructed to print copies of this resolution and send them to all insurance companies doing business in Indiana under the Workmen's Compensation Act and that all copies sent to the Fort Wayne Medical Society members be tagged with the following notice:

"The adoption of this resolution in effect advises against any member of the society signing any fee bill that does not meet the requirements of the law in respect to the amounts paid for services."

Motion carried.

The society then adjourned.

Meeting of Oct. 19, 1915

The Fort Wayne Medical Society met in regular session at the Assembly Room with twenty-two members present. The meeting was called to order by the president. The minutes of the preceding meeting were read and approved.

CLINICAL CASES

Dr. Metcalf presented a case of skin eruption which began in a localized area on the chest at a point of former trauma. From this area the eruption extended over the entire body surface. No discussion.

Dr. McCaskey reported the case of an unmarried woman, aged 32. There was a neuropathic and psychopathic family history and the patient had had two or three slighter attacks before. Two weeks prior to his visit she had a severe attack of vomiting and abdominal pain with tenderness over McBurney's point. Two or three days later she became insane and continued so up to the time of his examination.

She was rather violent, had to be held in bed much of the time, was oblivious of surroundings and silent. Excepting when engaged in struggles with attendants the entire voluntary musculature of the body was in a state of extreme tension and rigidity. When quiet the limbs were in a cataleptic condition and could only be moved or bent by the use of considerable force. The insanity approximated Kahlbaum's katatonia.

Pulse was 160 per minute and the temperature 102.5. Blood examination showed 22,000 leukocytes with 90 per cent. P., 6 per cent. S., 4 per cent. Tr., E. O., B.O. Spinal fluid contained no cells nor globulin. Urine normal.

It was impossible to determine the presence or absence of a Kernig, knee jerk, ankle clonus or Babinski.

The next day the white cell count had dropped to 15,000, with almost exactly the same differential count.

It looked as though the insanity was complicated by a suppurating appendix, and they were advised to bring the patient to the hospital, for observation and operation if indicated. This was declined and subsequent reports for a few days were that the patient was doing well, with normal pulse and temperature.

About one week later she became worse, went into collapse and died.

The paper of the evening was read by Dr. K. K. Wheelock on "The Blood-Clot Dressing in Simple Mastoid Operations."

(Sec paper published in Indiana State Medical Association Proceedings.)

DISCUSSION

Dr. Glock: I have seen the blood-clot dressing used in a number of instances in the Philadelphia clinic. The best percentage of successful results was a little better than 50 per cent. of the cases treated. After the method was used for a short time it was dropped almost as quickly as it was taken up. I have seen a number of Dr. Wheelock's cases treated in this manner, and the results were fine. I have been in the habit of packing loosely in the lower angle of the mastoid and after the ear ceased suppurating to withdraw the packing and wipe the area with a nitrate of silver solution. Good results have followed this treatment in my hands. I believe there is no more reason to think that this blood-clot dressing would not be just as successful in other areas of the body.

Dr. McBride: Dr. Wheelock has had a very high percentage of good results; better than most men report throughout the country. Many of the men

that I talked to in the meeting in Chicago last week of the Society of Laryngology and Ophthalmology were not as enthusiastic over this form of treatment as is Dr. Wheelock. In an infected wound we were always taught to drain, and while I feel that packing is unnecessary, drainage of the lower angle of the wound is essential.

Dr. Porter: I have always thought that the after-treatment of mastoid wounds was the most unsurgical of any treatment I have ever seen. The idea of pulling out the drainage and stirring up that infection over it, seems to me to be foolish, and I have often wondered why these cases do not have more trouble than they do. If I were going to do this operation I would certainly use the blood-clot plan of dressing, and I would not change the dressing in this case daily if I did any other plan of operation.

Dr. Bruggemann: I have seen many of Dr. Wheelock's cases treated by this plan. If I were to have a mastoid operation I should want the blood-clot dressing. The results of these cases I have seen are certainly better than the old method of treatment. This method of dressing was introduced years ago by Schädde. In cases of osteomyelitis, I am not sure, in spite of the observation of Vaughn and Novey that the blood clot has very much antiseptic power.

Dr. Wheelock (closing): My enthusiasm for this type of operation is perhaps the enthusiasm of the convert to a new method and I may receive a severe shock to that enthusiasm. I hope to have a larger number of cases to report in a short time. I have been surprised myself how quickly suppuration of the ear will cease by this method of treatment. Wash the canal with alcohol and a hot saline solution, then pack it with sterile gauze before the operation. A good deal of serum pours out of the wound so that the dressings are stained by the sanguinolent discharge. Canfield of Ann Arbor has had three deaths from meningitis following the use of this method of operation. If you have done a mastoid operation in young children and had to pack the mastoid with daily dressings, you cannot help but feel that any method of operation which obviates redressing is certainly welcome.

Bill of C. J. Lose for \$5.50 allowed. Meeting then adjourned.

G. VAN SWERINGEN, Secretary.

ELKHART COUNTY

November Meeting

Meeting of November 4 called to order in Town Hall, Middlebury, at 2:25 p. m. by President Haywood. Minutes of October meeting read and approved.

Paper, "What the Man of Internal Medicine Should Know About Surgery," S. O. Barwick, Elkhart.

Under the seven captions: anatomy, principles of surgery, preoperative treatment, antisepsis, asepsis, anesthesiology, and postoperative treatment, the essayist discussed at some length the fundamentals of each. His conclusion was to the effect that the internist should qualify himself so that he may become the competitor of the surgeon.

Paper, "Analgesia and Anesthesia in Labor," B. F. Teters, Middlebury.

A very slightly dilated, rigid, and painful cervix calls for a hypodermic of morphin in the first stages of labor. Chloroform is the anesthetic of choice in both the first and second stages of parturition. Surgical anesthesia for operative obstetrics. The essayist quoted Krönig, Holzbach, Seigel, Coleman and Lamphear, Newell and Baer in his discussion of scopolamin-morphin analgesia and came to the following conclusions:

1. That the method is not adapted as yet to general private practice out of the hospital.

2. That it prolongs labor.

3. That it increases the danger to the child.

4. That it is comparatively free from danger to the mother.

5. That it does relieve pain in most cases of labor in which it is used.

6. That it does not come up to the expectations of the laity produced by the extravagant publications of the lay press.

7. That it produces great nervous disturbances in many cases.

8. That the method is not yet perfected.

9. That the greatest benefit to be derived is the interest aroused, and the hope that the discussion of the method will result in great good to womankind, if not by being finally perfected and made practical, at least by compelling obstetricians to accede to the demands of the public, and render childbirth as nearly painless as possible.

Paper, "Indications and Contraindications for the Use of Pituitary Preparations in Obstetrical Practice," J. O. Walter, Bristol.

Pituitary extracts used in therapeutics are made from the posterior lobe of the gland. Method of extraction described. Pituitary extract directly stimulates contraction of all involuntary muscle fibers; other physiologic effects given. Howell gives indications for its use—prolonged labor from inertia uteri or insufficient uterine force with no mechanical obstruction: in cases where it becomes necessary to induce labor at or before term, in postpartum hemorrhage or hemorrhage during miscarriage. Pituitrin reduces number of cases where forceps is indicated, makes forceps delivery easier, minimizes postpartum hemorrhage, saves strength and vitality of mother. Use contraindicated in mechanical obstruction, contracted or deformed pelvis, abnormal presentation, multiple pregnancy.

On account of its effect on the blood pressure and heart action, recommended in shock, toxic myocarditis and cardiac conditions where the blood pressure is low. Laboratory experiment has shown pituitary extract to be a competent galactagogue.

DISCUSSION

E. E. ASH, Goshen: Case of hyoscin-morphin analgesia should be carefully selected. Laity, in spite of the publicity given the subject, do not understand the prerequisites under which twilight sleep must be given. Pituitrin a Godsend.

E. D. STUCKMAN, New Paris: Has not seen one case in his practice where twilight sleep has been indicated.

E. HOLDEMAN, Elkhart: Has seen accident cases, taken care of under very uncleanly conditions, heal up kindly. Anesthesia indicated in obstetrics.

F. N. DEWEY, Elkhart: Misleading magazine articles illustrated by pictures of extraordinarily large babies

born by twilight sleep route. Cost of oxygen, nitrous oxid anesthesia prohibitive in routine practice. More frequent vaginal examinations necessary in hyoscin-morphin analgesia, hence more danger of infection. Use of pituitrin, like throwing patient into "fits" and then curing patient of "fits."

F. A. BENHAM, Elkhart: Use of pituitrin still in amateur stage. One Elkhart physician said in recent discussion that he used pituitrin in every case. His mortality percentages were not given.

E. M. HOOVER, Elkhart: Folly to try to imitate the usages in Freiburg, still their report must be taken seriously. Twilight sleep now on trial in the various hospitals of this country. Pituitrin indicated in selected cases only, to be used as a routine.

G. W. SPOHN, Elkhart: Organotherapy requiring a wider applicability. Is pituitrin being used to the advantage of the obstetric surgeon or the woman in labor. Limitations necessary in medical practice as defined from surgical practice.

W. B. KREIDER, Goshen: Dr. Kapp of San Jose, Calif., uses heroin $\frac{1}{2}$ grain hypodermically in labor; has effect of producing twilight sleep; has had no bad results. Seldom has to use two injections oftener than one hour apart.

D. L. MILLER, Goshen: Three timely subjects. First, is practical, second, experimental stage, third, theoretical. Has never obtained any benefit to his patients by use of pituitrin.

I. J. BECKNELL, Goshen: Has employed chloroform in obstetrics for forty years. Splendid results. Champions pituitrin.

S. C. WAGNER, Wakarusa: Defends ether in obstetric practice. Do not administer anesthetic while patient is in any degree of shock. Effect on fetus of morphin and chloroform? Ardent supporter of pituitrin. Case cited, called in one hour after labor began. Patient had not felt life for several hours. No fetal pulse on examination. Prolapsed cord, no pulsation. Roomy pelvis. Etherized patient and in fifteen minutes the dead baby was born. Ether given the credit for speedy delivery.

G. W. KIRBY, Goshen: Chloroform in first stages retards pains. Pituitrin and chloroform, no relaxation of pains. Not necessary to use ergot after pituitrin in his experience.

J. C. FLEMING, Elkhart: Efforts of man in general practice have been minimized and surgeon over-emphasized. There will be an adjustment. Internist and surgeon must cooperate and each receive adequate fee for services. Among border line cases, acute abdominal catastrophies are most important. Ninety per cent. of cases showing pain in abdomen and vomiting are surgical cases. Mortality records of cases of perforation of alimentary tract show most of them have not been recognized early enough. Operation after forty-eight hours, mortality 80 to 90 per cent. Morphin indicated in old primipara in early stages especially. Heard papers by Krönig and Gauss before American Medical Association and American Gynecological Association within past few months. Arguments pro and con. Baer of Michael Reese Hospital gave best résumé and the truth of the subject. Too few men of type of Christian Fenger who used to say, "It may be this and it may be that," and frequently would say, "I do not know." Man who denounces pituitrin either does not know how to use it or he has been using a poor preparation. One

or two doses of pituitrin will save use of forceps in many cases.

B. F. KUHN, Elkhart: Krönig first used morphin-scopolamin to make pains bearable during prolonged labor. Woman compelled to bear early pains without relief will wear out during second stage and forceps will have to be used where, otherwise, it would have been unnecessary. Pituitrin one of most valuable recently acquired drugs. Case cited, postpartum hemorrhage controlled by use of pituitrin some six or seven hours after it was given.

S. O. BARWICK, closing: Call in specialist who shall be square with you. Surgeon is frequently looked on as being superior to the internist. This must be corrected in the public mind.

B. F. TETERS, closing: Impressed with the importance attached in Dr. Barwick's paper to equalization in the importance of the internist and surgeon, in any case. Case cited where pituitrin was preeminently indicated; had none with him.

J. A. Snapp announced the presence in the county and in the meeting of Miss Guynedd Webster who is beginning her duties as public health visiting nurse in the county. Interesting talks by Miss Webster, Miss Essig and Mrs. White on Antituberculosis and Public Welfare Work.

Report by A. C. Yoder, chairman annual meeting committee. Thirty-five members and Drs. A. L. Fisher and C. A. Inks and nine nurses in attendance.

After adjournment, chicken dinner was served at Park View Hotel.

JAMES A. WORK, JR., Secretary.

BARTHOLOMEW COUNTY

Bartholomew County Medical Society met at Columbus at 8:15 p. m., November 14, in the office of Dr. A. M. Kirkpatrick, with Dr. H. H. Kammon presiding.

An informal discussion of the condition of our society was freely participated in by the members present.

Following officers elected for ensuing year: president, Dr. J. I. Maris; vice president, Dr. W. H. Butler; secretary-treasurer, Dr. J. W. Benham; censor for three years, Dr. E. U. Wood; delegate to state association, Dr. George T. MacCoy.

No papers were read, due to the fact that those on the program were unable to attend this meeting. One or two case reports were given, however, making the meeting a very interesting one.

This society now has a membership of twenty-two, with prospects for several new ones.

Adjourned. J. W. BENHAM, Secretary.

CARROLL COUNTY

Carroll County Medical Society met at the Christian Church at Delphi, December 10, and elected the following officers for the coming year: president, P. W. Conway; vice president, Eva N. Kennedy; secretary-treasurer, W. R. Quick.

After the business session the society had for their guests the Parent-Teacher Club, and Dr. Caroline E. Geisel of Battle Creek, Mich., a member of the Flying Squadron, gave an excellent talk on Preventive Medicine.

A banquet at Crosby's was the closing feature of the year.

W. R. QUICK, Secretary.

KOSCIUSKO COUNTY

Resolutions of Kosciusko County Medical Society:

It is with profound regret that we have to record the death of our fellow associate and brother practitioner, Dr. T. J. Shackelford, whose habits of life we deem worthy of emulation; therefore be it

Resolved, That we express to the widow our heartfelt sympathy and regret at the untimely demise of our lamented professional brother.

Resolved, That the above resolution be spread on the minutes of the Kosciusko County Medical Society and a copy be sent to Mrs. Shackelford.

C. W. BURKET,
C. C. DuBois,
C. E. LEEDY,

Committee.

LAKE COUNTY

The annual meeting of Lake County Medical Society was held in the Hammond Public Library, Wednesday, December 8, at 7 p. m., Dr. John Iddings presiding.

The president's address was the feature of the evening, dealing with the affairs of the society for the past two years, and making suggestions for the future.

Election of officers for 1916 resulted as follows: president, Ira Miltimore, Gary; vice president, J. A. Teegarden, Indiana Harbor; secretary-treasurer, E. M. Shanklin, Hammond; censor, three years, J. W. Iddings; delegates, E. E. Evans and W. F. Howat; alternates, H. A. Metz and T. W. Oberlin.

Dr. J. W. Iddings was chosen to present the Annual Oration in Medicine in September.

It was announced that the meetings from January to June would be held in Gary, and those from July to December in Hammond.

The County Tuberculosis Hospital was again discussed and plans made to attend the next meeting of the county commissioners' court at Crown Point.

On motion, the date of meeting of the society was restored to the second Thursday in each month.

Adjourned. E. M. SHANKLIN, Secretary.

SULLIVAN COUNTY

Sullivan County Medical Society met in Farmersburg, December 1, with Vice President Dr. J. T. Oliphant in the chair.

Minutes of October meeting read and approved.

The treasurer made his annual report, showing \$107.19 received and \$117.53 expended; overdraft, \$10.44. Report accepted.

The election of officers was then called for with the result that Dr. J. T. Oliphant was elected president; Dr. C. U. Thralls vice president; Dr. J. B. Maple, secretary-treasurer; Dr. J. M. Billman, delegate to state meeting.

The new president appointed the following committees: Censors, Van Cleave, Thompson and Walters; Necrology, Maple; Quacks and Frauds, Scott and Briggs; Annual Meeting, Crowder, Billman and Briggs; Annual Picnic, Thralls, Maple and O'Dell.

Dr. Van Cleave reported a case of a burn in which a dry dressing of gauze and boric acid had been used with splendid results. The report was

well discussed and the various treatments of burn threshed out. Moist dressing and the open method were generally approved.

Dr. J. H. Weinstein of Terre Haute presented a discussion of gastro-enteroptosis and enteroptosis and illustrated his remarks with a number of Roentgen-ray plates showing a series of cases. He said in part, gastro-enteroptosis and enteroptosis produce intestinal stasis, intestinal stasis produces gastro-enteroptosis and enteroptosis, a ptotic may be a static, a static may be a ptotic, but a ptotic may not be a static nor must a static be a ptotic. Surgical cures as well as medical and mechanical treatments have not been wholly satisfactory. The well-nourished patient with regular bowel movements frequently presents himself with varying other symptoms, and yet a careful physical examination in conjunction with thorough Roentgen-ray work will reveal the static condition of the bowel, which retains the bismuth meal many hours longer than it should, or a very late emptying of the stomach. Any stomach is normal that is functioning normally no matter what its position. Women suffer more than men, their percentage being 80 to 90, while in men but 5 per cent. are involved. Wearing belts increases the percentage in men. The proper strapping of the abdomen very frequently relieves this condition, strapping in such a way as to support the abdominal contents. Proper diet and exercise are extremely important.

Following the discussion of this paper the society adjourned to meet in social session at which they were entertained by the local physicians.

Visitors were Drs. C. N. Combs, R. L. Woodard, J. H. Pierce and J. H. Weinstein, all of Terre Haute.

Members present: Oliphant, Thralls, Corbin, Asbury, Walters, Neff, Thompson, O'Dell, Higbee, Miles, Freeman, Van Cleave, Scott, Briggs, Crowder and Maple.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

EURESOL PRO CAPILLIS.—Euresol (see New and Nonofficial Remedies, 1915, p. 268) perfumed to render it suitable for scalp lotions. Merck & Co., New York (*Jour. A. M. A.*, Dec. 4, 1915, p. 2009).

POLLEN EXTRACT (POLLEN VACCINE).—A solution of pollen protein. It is used for the relief or prophylaxis of a common type of hay fever (pollinosis). Before using it the patient's susceptibility and tolerance should be determined. Treatment with pollen extract has seemed to give relief in some cases.

HAY FEVER VACCINE, MULFORD (AUTUMNAL).—Pollen extract prepared from ragweed. Marketed in packages of four syringes containing, respectively, 0.0025 mg., 0.005 mg., 0.01 mg. and 0.02 mg. of pollen protein. Also in separate syringes containing 0.02 mg. pollen protein. The H. K. Mulford Co., Philadelphia (*Jour. A. M. A.*, Dec. 4, 1915, p. 2009).

MERCURIC SUCCINIMIDE, MERCK.—A nonproprietary brand of mercuric succinimide admitted to New and Nonofficial Remedies. Merck & Co., New York (*Jour. A. M. A.*, Dec. 4, 1915, p. 2009).

MORPHINE MECONATE, MERCK.—A nonproprietary brand of morphine meconate admitted to New and Nonofficial Remedies. Merck & Co., New York (*Jour. A. M. A.*, Dec. 4, 1915, p. 2009).

SWAN'S STAPHYLOCOCCUS BACTERIN (No. 37).—Marketed in packages of six 1 Cc. vials and in 20 Cc. vials. Swan-Myers Company, Indianapolis, Ind.

SWAN'S STREPTOCOCCUS BACTERIN (No. 43).—Marketed in packages of six 1 Cc. vials and in 20 Cc. vials. Swan-Myers Company, Indianapolis, Ind.

CALCIUM PEROXIDE, MERCK.—A nonproprietary brand of calcium peroxide admitted to New and Nonofficial Remedies. Merck & Co., New York.

SODIUM PEROXIDE, MERCK.—A nonproprietary brand of sodium peroxide admitted to New and Nonofficial Remedies. Merck & Co., New York.

ZINC PEROXIDE, MERCK.—A nonproprietary brand of zinc peroxide admitted to New and Nonofficial Remedies. Merck & Co., New York.

ETHYL SALICYLATE, MERCK.—A nonproprietary brand of ethyl salicylate admitted to New and Nonofficial Remedies. Merck & Co., New York.

OSMIAC ACID, MERCK.—A nonproprietary brand of osmium tetroxide admitted to New and Nonofficial Remedies. Merck & Co., New York.

SODIUM OLEATE, MERCK.—A nonproprietary brand of sodium oleate admitted to New and Nonofficial Remedies. Merck & Co., New York.

THIOSINAMINE, MERCK.—A nonproprietary brand of thiosinamine admitted to New and Nonofficial Remedies. Merck & Co., New York.

UREA, MERCK.—A nonproprietary brand of urea admitted to New and Nonofficial Remedies. Merck & Co., New York.

AMPULS SODIUM CACODYLATE, MULFORD, 7¾ GRAINS.—Each ampule contains sodium cacodylate 0.5 Gm. H. K. Mulford Company, Philadelphia.

AMPULS SODIUM CACODYLATE, MULFORD, 15 GRAINS.—Each ampule contains sodium cacodylate 1 Gm. H. K. Mulford Company, Philadelphia.

AMPULS SOLUTION PITUITARY EXTRACT, MULFORD, 0.5 Cc.—Each ampule contains solution pituitary extract 0.5 Cc. H. K. Mulford Company, Philadelphia (*Jour. A. M. A.*, Dec. 11, 1915, p. 2085).

SCARLATINA STREPTO-SEROBACTERIN, MULFORD (THERAPEUTIC), (SENSITIZED SCARLATINAL STREPTOCOCCIC VACCINE).—Marketed in packages of four syringes. H. K. Mulford Co., Philadelphia (*Jour. A. M. A.*, Dec. 18, 1915, p. 2167).

QUININE DIHYDROCHLORIDE (QUININAE DIHYDROCHLORIDUM).—The dihydrochlorid of the alkaloid quinine. Since quinine dihydrochloride is very soluble, its use has been proposed where concentrated solutions of quinine are wanted, as for subcutaneous injections and similar purposes.

AMPULS SOLUTION PITUITARY EXTRACT, MULFORD, 0.24 GM.—Each ampule contains 0.24 Gm. quinine dihydrochloride in 1 Cc. of sterile solution. H. K. Mulford Co., Philadelphia.

AMPULES QUININE DIHYDROCHLORIDE, MULFORD, 0.5 Gm.—Each ampule contains 0.5 Gm. quinine dihydrochloride in 1 Cc. of sterile solution. H. K. Mulford Co., Philadelphia (*Jour. A. M. A.*, Dec. 18, 1915, p. 2167).

PURIFIED TRICRESOL, MULFORD.—A mixture of isomeric cresols, corresponding closely to Cresol, U. S. P. H. K. Mulford Co., Philadelphia (*Jour. A. M. A.*, Dec. 18, 1915, p. 2167).

IODOSTICKS (IODINE 60 PER CENT. AND POTASSIUM IODIDE 40 PER CENT.).—Wooden sticks $1\frac{1}{2}$ inches long, tipped with a mixture of iodine 60 per cent. and potassium iodide 40 per cent. Antiseptic Supply Co., New York (*Jour. A. M. A.*, Dec. 18, 1915, p. 2167).

IDOAPPLICATORS AND IODOAPPLICATORS, SPECIAL (IODINE 60 PER CENT. AND POTASSIUM IODIDE 40 PER CENT.).—Wooden sticks $6\frac{1}{2}$ and 12 inches long, respectively, tipped with a mixture of iodine 60 per cent. and potassium iodide 40 per cent. Antiseptic Supply Co., New York (*Jour. A. M. A.*, Dec. 18, 1915, p. 2167).

G. STROPHANTHIN (THOMS), MERCK.—A nonproprietary brand of ouabain, crystallized. Merck and Company, New York.

MERCURY BINIODIDE OIL SOLUTION IN AMPULES, H. W. AND CO.—One Cc. of solution contains red mercuric iodide in a neutral fatty oil, 0.1 Gm. ($\frac{1}{4}$ grain). Hynson, Westcott and Co., Baltimore.

MERCUROL TABLETS, $\frac{1}{4}$ GR.—Each tablet contains mercuriol 0.016 gm. Parke, Davis and Co., Detroit.

MERCUROL TABLETS, $\frac{1}{2}$ GR.—Each tablet contains mercuriol 0.03 gm. Parke, Davis and Co., Detroit.

MERCUROL TABLETS, 1 GR.—Each tablet contains mercuriol 0.065 gm. Parke, Davis and Co., Detroit.

MERCUROL TABLETS, 2 GRs.—Each tablet contains mercuriol 0.13 gm. Parke, Davis and Co., Detroit.

MERCUROL WITH POTASSIUM IODIDE TABLETS.—Each tablet contains mercuriol $\frac{1}{4}$ gr. and potassium iodide 1 gr. Parke, Davis and Co., Detroit.

IODALBIN AND MERCUROL TABLETS.—Each tablet contains iodalbin 5 grs. and mercuriol 1 gr. Parke, Davis and Co., Detroit.

LIQUID PETROLATUM, MERCK.—A nonproprietary brand of liquid petrolatum, U. S. P. It is made from American petroleum. It is colorless, non-fluorescent, practically odorless and tasteless. Merck and Co., New York (*Jour. A. M. A.*, Dec. 25, 1915, p. 2239).

PROPAGANDA FOR REFORM

PROPRIETARY DIGITALIS PREPARATIONS.—The Council on Pharmacy and Chemistry reports that it is becoming increasingly apparent that the tincture of digitalis produces the full therapeutic effects of digitalis, and that when it is properly made it is as stable as any liquid preparation of digitalis now available; and that the tincture has the systemic side actions of digitalis, including the emetic, in no greater degree than the various proprietary preparations of this drug. Strophanthin and crystallized ouabain are now available in sterile solutions in ampules and afford a convenient means of promptly securing the cardiac action by intramuscular or intravenous injection (*Jour. A. M. A.*, Dec. 4, 1915, p. 2024).

DR. PIERCE'S PLEASANT PELLETS.—The A. M. A. Chemical Laboratory reports that the pills responded to tests for emodin and aloin. Essentially, Pierce's Pleasant Purgative Pellets appear to be an ordinary laxative pill. That the active principle of aloes was found in the pills is of interest in view of the fact that the leaflet advertising Pierce's Pleasant Pellets warns the public against the use of purgatives composed of aloes (*Jour. A. M. A.*, Dec. 4, 1915, p. 2025).

NOSE-IONS.—The A. M. A. Chemical Laboratory reports that the circular matter for "Nose-Ions" is a crude attempt to impose on a scientifically trained profession with pseudo-scientific patter about ions, ionic dissociation and the positive and negative charges of ions. It appears that Nose-Ions is essentially an ointment consisting of a petrolatum base, containing some odorous principles such as camphor, menthol and eucalyptus, with some salicylic acid and some quinine (*Jour. A. M. A.*, Dec. 4, 1915, p. 2026).

OZOMULSION.—This "patent medicine," long sold as a consumption "cure," has been declared misbranded under the Food and Drugs Act, the therapeutic claims being both false and fraudulent. The preparation was found to be an emulsion of cod liver oil, with glycerine and phosphorus compounds of calcium and sodium (*Jour. A. M. A.*, Dec. 18, 1915, p. 2184).

DR. WHITTINGTON'S TREATMENT FOR CONSUMPTION.—This preparation was examined in the A. M. A. Chemical Laboratory. From the analysis it appears that Dr. Whittington's Treatment for Consumption is a flavored syrup devoid of potent ingredients other than alcohol. Dr. Whittington is a member of the Medical Society of California (*Jour. A. M. A.*, Dec. 18, 1915, p. 2184).

ROGERS' CONSUMPTION CURE.—Rogers' Consumption Cure and Cough Lozenges and Rogers' Inhalant were advertised for the treatment of diseases of the lungs, etc. The government chemists reported that the first consisted of sugar lozenges, containing a small amount of gum and a trace of oil of rosemary. The inhalant was found to be an alcoholic solution of volatile oil, chiefly rosemary. The government held the therapeutic claims made for these preparations false. The owners having made no defense, they were fined (*Jour. A. M. A.*, Dec. 18, 1915, p. 2185).

MIST. HELONIN COMP.—The only available information in regard to the composition of Mist. Helonin Comp., Schlotterbeck and Foss, is a statement in a circular that the active ingredients are helonin, senecioin and avenin and the statement on the label that it contains 45 per cent. alcohol. The alcohol content is that of strong whiskey. The practically inert drugs asserted to be contained in it would not in the least interfere with its use as a cordial. On the basis of the information supplied by the manufacturer, Mist. Helonin Comp. may be classified as an objectionable and worthless nostrum—unless we regard the alcohol as of value (*Jour. A. M. A.*, Dec. 18, 1915, p. 2186).

INCOMPATIBILITY OF QUININE WITH ASPIRIN.—Experiments have shown that weak acids, such as acetylsalicylic acid (aspirin), citric, malic, acetic or tartaric acid under the influence of heat may convert quinine into its poisonous isomer quinotoxin and cinchona into cinchotoxin. The danger of the formation of quinotoxin in the body cannot be great.

Ready-made mixtures of quinine of cinchona preparations with weak organic acids should be avoided (*Jour. A. M. A.*, Dec. 18, 1915, p. 2187).

SALVARSAN MADE IN U. S.—Because of the shortage due to the war, salvarsan is made and offered for sale under its chemical name to physicians and hospitals urgently in need of it by the dermatologic laboratories of the Philadelphia Polyclinic. Dr. Jay F. Schamberg, the director of the Department of Dermatological Research, states that the product made by the dermatologic laboratories has been employed on hundreds of cases with excellent therapeutic results and with no reports of accident or untoward complications (*Jour. A. M. A.*, Dec. 18, 1915, p. 2179).

CU-CO-BA, TARRANT.—From the statements of the circulars, it appears to be one of the copaiba and cubeb preparations which at one time were in vogue as a routine measure in the treatment of gonorrhea (*Jour. A. M. A.*, Dec. 25, 1915, p. 2257).

POSLAM.—The A. M. A. Chemical Laboratory in 1909 found that essentially Poslam consisted of zinc oxide 12.01 parts, sulphur 6.67 parts, corn starch 22.00 parts, tar oil 15.18 parts, menthol and salicylic acid, small quantities, fatty base to make 100 parts. For skin affections which may be benefited by ointments the official ointments are as effective as the proprietary products and have the added advantage of being of known and more uniform composition (*Jour. A. M. A.*, Dec. 25, 1915, p. 2256).

ORTHOFORM-NEW.—Treasury Decision 2194 contemplates registration of orthoform-new under the Harrison Narcotic Law (*Jour. A. M. A.*, Dec. 25, 1915, p. 2257).

BOOK REVIEWS

COLLECTED PAPERS FROM THE RESEARCH LABORATORY, PARKE, DAVIS & Co., DETROIT, MICH. Dr. E. M. Houghton, Director. Reprints, Volume 3, 1915.

This volume is made up of articles published from this laboratory in various scientific journals during 1914. Physicians who desire to know the scope of the research work carried out in such a laboratory during the course of a year will find this publication quite interesting.

SAUNDERS' CATALOGUE.

W. B. Saunders Company, publishers, of Philadelphia and London, have just issued their 1916 eighty-four page illustrated catalogue. As great care has evidently been taken in its production as in the manufacture of their books. It is a descriptive catalogue in the truest sense, telling you just what you will find in their books, and showing you by specimen cuts, the type of illustrations used. It is really an index to modern medical literature, describing some 300 titles, including forty-five new books and new editions not in former issues. A postal sent to W. B. Saunders Company, Philadelphia, will bring you a copy—and you should have one.

BABY'S WELFARE.

Have you seen the Borden's Condensed Milk Company's fifty-two page book, "Baby's Welfare?" It is a handsomely bound and illustrated book, containing many excellent and helpful points for the mother or expectant mother. You can get copies of this to

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THE MEDICAL CLINICS OF CHICAGO. Volume I, No. 3 (November, 1915). Octavo of 200 pages, 23 illustrations. Published bi-monthly by W. B. Saunders Company, Philadelphia and London. Price per year: paper, \$8; cloth, \$12.

This third number of these medical clinics is fully up to the standard set by the first two numbers. It includes a wide range of subjects, all of which are of practical importance. Abt's talks on "hysteria in children," "enuresis" and "anorexia in infants" are unusually delightful. Hamburger's comprehensive review of the subject of "abdominal pain" is one of the best features presented in these clinics up to the present time. No general physician ought to miss these and the other splendid discussions contained in this issue.

COLON HYGIENE. Comprising New and Important Facts Concerning the Physiology of the Colon and an Account of Practical and Successful Methods of Combating Intestinal Inactivity and Toxemia. By J. H. Kellogg, M.D., LL.D., Superintendent of the Battle Creek Sanitarium, Battle Creek, Mich., Good Health Publishing Co., 1915.

The chief purpose of this book is to give the author an opportunity to present in a popular way his ideas on the subject of constipation and to proclaim the success obtained in the treatment of this trouble in the well-known sanatorium of which he is the head.

The idea that "alimentary toxemia" or "intestinal auto-intoxication" may be responsible for a great many organic diseases of unknown etiology is not based on sufficient evidence to justify one in emphasizing its importance and making such exaggerated statements as the author does in this new book of his. As a matter of fact we know so little at present of the so-called "intestinal auto-intoxication" that the less said about it the better.

To the physician this book brings no new knowledge that he has not already been able to gather from his textbooks and the current literature.

SYPHILIS AS A MODERN PROBLEM. By William Allen Pusey, M.D., Professor of Dermatology in the University of Illinois. Cloth. 130 pages. 50 cents; in paper cover, 25 cents. Chicago, American Medical Association, 1915.

This is a monograph which is intended for the layman as well as the physician, and can be read with profit by both. It has been published as one of the efforts of the American Medical Association in its campaign of enlightenment regarding health matters. The book considers syphilis from the standpoint of its effect on society rather than a disease which should be treated by the medical profession. There are chapters on the history of syphilis, the course of the disease—including the primary, secondary and hereditary manifestations—its etiology, pathology, prognosis and prophylaxis. The disease is considered as one of the great sociologic problems, and accordingly there are chapters which treat on the effect of syphilis on the length of life, the relative frequency with which it produces tabes and paresis, the time when the syphilitic may marry, the

prevalence of syphilis and its comparative frequency in men and women, and its relation to prostitution. In the final conclusions the author shows that prevention of syphilis is practicable by sanitary measures, and he points out what these measures are and the reasons for the necessity of an organized sanitary attack on this disease.

The work is devoid of sensationalism or exaggeration, and is a sane exposition of the salient facts concerning one of the greatest plagues with which the human race is afflicted. It is worthy of the careful consideration of all thinking people.

PROGRESSIVE MEDICINE. Volume XVIII, No. 4, December, 1915. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College, assisted by Leighton F. Appleman, M.D., Instructor in Therapeutics, Jefferson Medical College. Lea & Febiger, Philadelphia and New York.

A good review on "diseases of the digestive tract and allied organs, the liver, pancreas and peritoneum" make up the first 130 pages of this volume.

The next forty pages are taken up by J. Harold Austin with his review of "diseases of the kidneys." This is a splendid piece of work—one that ought to be read by every practicing physician.

Then follow thirty-five pages on "genito-urinary diseases" by Charles W. Bonney. The author has done justice to the subject in his review.

The next 120 pages are contributed by Bloodgood on the subject of "surgery of the extremities, shock, anesthesia, infections, fractures, and dislocations and tumors." Practically all of this work is devoted to military surgery, for as the author says "it has been almost impossible to keep away from military surgery in this review. Its importance dominates your own mind, and it pretty well dominates the literature since September, 1914."

The concluding chapter of eighty-five pages is taken up by Landis with his remarks on "practical therapeutic referendum," which will be found to be quite interesting and instructive.

MEDICAL AND VETERINARY ENTOMOLOGY. A Textbook for Use in Schools as Well as a Handbook for the Use of Physicians, Veterinarians and Public Health Officials. By William B. Herms, Associate Professor of Parasitology in the University of California, Consulting Parasitologist for the California State Board of Health, and formerly Professor of Zoology and Parasitology in the San Francisco Veterinary College. Price, \$4. New York, The Macmillan Company, 1915.

That branch of medicine which deals with insects as relating to disease is a new science as yet, but it is one which is becoming of increasing importance. A book in which our knowledge of the subject of medical entomology would be systematized and in which the subject would be presented in a practical and really interesting manner is needed very much indeed. Our need for such a work has been met by the author. In this book he does not present a comprehensive treatise, but he gives the subject-matter in such form that it can be appreciated by the physician, the veterinarian, the health officer and the sanitarian, the professions for whom this book was intended. Many excellent illustrations are given, and these help considerably in making the subject attractive and appreciated in the proper light. Physicians will find in this volume a great deal that will be not only interesting but of real value to them.

Intestinal Stasis, Ptosis and Constipation

have assumed today an importance which the medical profession never before imagined. This is because the toxemia which may accompany these conditions, with its train of detrimental results, has been demonstrated, while the fact that cases may be treated successfully by the physician, is recognized.

It has been shown that Ptosis, Intestinal Stasis and Constipation do not necessarily occur together. Each may exist by itself, or any degree of combination of two or all may obtain. The essential matter is to prevent the toxemia by preventing an abnormal delay in the passage of material along the gastro-intestinal tract and by hindering development of bacteria.

The medicinal remedy, *par excellence*, is, by common consent, LIQUID PETROLATUM, *Heavy*, administered early in the case and persisted in until a cure is had, or until it is demonstrated that surgical conditions prevent results.

We therefore wish to call the attention of the medical profession to

Liquid Petrolatum, Squibb (*Heavy, Californian*)

as especially suited to relieve constipation and to prevent alimentary toxemia. It is colorless, tasteless, neutral and non-irritating. It exceeds the quality requirements of the United States Pharmacopœia and the British Pharmacopœia, and is the purest and best mineral oil to be had. It is superior in essential respects to similar products, whether of Russian or American origin.

E. R. SQUIBB & SONS, New York

Agar

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An admirable agent for the treatment of chronic constipation.

AGAR has the natural property of absorbing water readily, and of retaining it.

It resists the action of intestinal bacteria as well as that of the enzymes.

Its chief use in medicine is in the treatment of chronic constipation.

♦ ♦ ♦

Agar is not digested.

It passes practically unaltered into the intestine, merging with the feces, adding to their bulk and keeping them uniformly moist.

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Agar has no systemic action.

It serves as a mechanical stimulant to the bowels.

It aids in the production of normal, healthy evacuation, a condition approximating the natural function.

Agar is supplied in 4-ounce and 16-ounce cartons.

One or two heaping tablespoonfuls (according to individual requirements) may be taken morning or evening, at mealtime, with milk or cream or mixed with a cereal food.

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A powerful and useful antiseptic, disinfectant and deodorant.

GERMICIDAL SOAP (McClintock) is prepared from pure vegetable oils combined with mercuric iodide, the most powerful germicide known.

It is a valuable antiseptic, deodorant and lubricant for hands and instruments.

It is an admirable general disinfectant.

It can be used to prepare antiseptic solutions without measuring, weighing or waste.

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Germicidal Soap (McClintock) is useful for cleansing minor wounds, as a deodorant in offensive hyperidrosis, for the preparation of vaginal douches—in fact, whenever and wherever a powerful detergent and disinfectant is required.

♦ ♦ ♦

Germicidal Soap (McClintock) does not attack nicked or steel instruments. It does not coagulate albumin.

Germicidal Soap, 2%: large cakes, one in a carton.

Germicidal Soap, Mild, 1%: large cakes, one in a carton; small cakes, five in a carton.

Germicidal Soap, Soft, 1%: collapsible tubes.

Germicidal Soap, Surgical, 1%: cylindrical sticks, each in a nickel-plated case.

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NEXT ANNUAL SESSION, FORT WAYNE, SEPT. 27, 28 AND 29, 1916.

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Professor of Obstetrics and Gynecology, College of Physicians and Surgeons, Columbia University, New York; Attending Obstetrician and Gynecologist to the Sloane Hospital for Women; Consulting Obstetrician to the City Maternity Hospital, etc., assisted by GEORGE H. RYDER, A.B., M.D., Instructor in Gynecology, College of Physicians and Surgeons, Columbia University, New York; Assistant Attending Obstetrician, Sloane Hospital for Women; Associate Surgeon, Woman's Hospital.

Octavo, 858 pages, with 499 engravings and 13 plates. Cloth, \$6.00 net.

During a protracted service as medical head of the Sloane Hospital for Women, where over 1,800 deliveries annually occur, the author has enjoyed exceptional opportunities for observation and experience in obstetrics; and for several years he has felt a growing sense of the duty of placing before the profession and students of medicine the methods of this institution and the results obtained. The present textbook of Obstetrics has seemed to him the most rational and perhaps the most useful way in which to meet this obligation. The work, in the methods advocated, is based upon the statistical results of the Sloane Hospital and upon the experience gained by the author in the hospital and in private practice. Another object of the work has been to present American statistics in obstetrics which, it is believed, represent the most extensive and careful records available in this country.—*From the Preface.*

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THE INDIANA STATE MEDICAL ASSOCIATION

Next Annual Session, Fort Wayne, September 27, 28 and 29, 1916

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THE JOURNAL

OF THE

INDIANA STATE MEDICAL ASSOCIATION

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ORIGINAL ARTICLES

THE USE AND MISUSE OF THE TINTED LENS IN REFRACTION*

FRED M. RUBY, A.B., M.D.
UNION CITY, IND.

It is because of the fact that for once the refractionist has apparently fallen afoul of a "cureall" that I am presenting this subject for discussion today. While tinted lenses probably do not come under the medical practice act, they should, inasmuch as they are often prescribed to cure a pathologic condition. It is not the aim of this paper to present anything new, but to review the subject briefly and open the way for full discussion. When our conjunctivitis cases go to the optician and he relieves them promptly with a pair of tinted lenses, after we have spent many days trying to oust the Morax-Axenfeld bacillus and the patient has spent several dollars with us we must face the music and line up our defense. We may know that we are right and that he is wrong, but to the patient who pays the bill it does not seem just right. Herein lies one of the problems that we as medical men must solve.

What are the causes of photophobia? Not the causes of the severe cases, but the mild ones that cause the patient to be restless in strong lights, especially if he uses his accommodation? Possibly we should ask the cause of asthenopia. We know that we have accommodative, nervous, muscular and retinal asthenopia. Treatment of these conditions is of two kinds: palliative and curative. With very slight hyperopia these asthenopias are quickly manifest on the slightest eye use, especially where artificial lighting causes undue effort on the part

of the intrinsic muscles of the eye. Also, with very slight conjunctivitis, and the attendant photophobia, asthenopia is quickly evident.

What should we, as trained eye men, do to correct such conditions? If our primary rule is to relieve suffering, a slight plus sphere in an absorptive glass or lens ordinarily will give prompt relief. But if we are to cure we know that removing the cause of the discomfort obviates the necessity for any lens. To give the patient a tinted lens with the idea that it will be a form of treatment to alleviate the discomfort until the rational treatment has had time to take effect is all right, providing the said patient does not decide that the relief has been secured and the subsequent treatment is to benefit the doctor rather than the patient.

In choosing a tinted lens that will reflect or absorb or prevent the passage of the irritant or the ultra-violet rays of the spectrum we know that the normal eye is accustomed to a certain proportion of the ultra-violet rays, but as this proportion increases the irritation likewise increases. It would seem that a light absorbing lens which admitted none of the ultra-violet rays would be ideal, but such is not the case. We find many eyes being as distinctly irritated by the total absence of these rays as with too many. The ideal lens, so far as I have been able to determine, is one which absorbs most of the irritative rays but allows some few to penetrate and stimulate a certain healthy reaction in the receiving end organs of the retina. Naturally the same lens, or the lens absorbing the same proportion of the ultra-violet rays, will not satisfy every eye.

The conclusions which I have to offer are based on the following selected cases:

CASE 1.—Mrs. F., aged 50. Fifteen years ago after treating for years for eczema and getting no results she was persuaded by a traveling "doctor" to allow him to put a rose-tinted lens

*Read before the Indiana State Medical Association at Indianapolis, Sept. 23, 1915.

on her right eye under the assumption that the light passing through this lens would be reddened and thus enrich the blood. She still wears the lens and eczema is still present to some degree, but she does not believe that she can do without the lens.

CASE 2.—Mrs. Sam S., 32, eyes not relieved with clear lens but relieved promptly with tinted lens. No conjunctivitis. Sclera very thin. Marked photophobia and asthenopia when tinted lens not used.

CASE 3.—Harry L., 18 years old; came to office wearing + 0.25 tinted lenses bought for \$17. Examination showed slight catarrhal conjunctivitis remedied by short corrective treatment and tinted lenses discarded.

CASE 4.—Mr. B., age 41 years; clerk in post office. Eyes watered easily and corrected lenses afforded only partial relief. Patient worked with insufficient light and poorly placed artificial light was only overcome by the tinted lenses.

CASE 5.—Mrs. E. G. R.; came to have her glasses changed. Said right eye was very sensitive to light and tired easily. Examination negative except for enlargement of anterior end of middle turbinate of the same side. Correction of nasal trouble resulted in cure. Tinted lenses might have relieved but would not have cured.

CASE 6.—Mrs. O., 44 years; eyes very sensitive to light; slight refractive error. Had sewed a great deal. Comfort was only secured with the tinted lens. After a year, the Morax-Axenfeld bacillus was finally dislodged and the tinted lens discarded.

CASE 7.—Charles W., 17 years old, picture machine operator; suffered severely with asthenopia from hyperopia of one half diopter. Relief while at work secured only by tinted lens. Change of occupation resulted in complete cure.

Conclusions.—When the eyes are to be constantly attacked by light which is rich in the ultra-violet rays, as in picture show operators, chauffeurs, workers on white goods, workers in blast furnaces, glass blowers and oxy-acetylene welders; when structural deficiencies allow the ultra-violet ray to penetrate too much into the eye, when the patient has asthenopia as one of a train of nervous symptoms and following light trauma, as well as in conjunctival photophobias, the tinted lens is a valuable agent, providing the primary object has not been lost sight of and the conditions corrected. Otherwise, as a cureall, it falls into the same class with "606," which the late Ehrlich never intended for a cureall—as well as with some of the misused serums.

DISCUSSION ON DR. RUBY'S PAPER

DR. JOHN R. NEWCOMB, Indianapolis: I feel that Dr. Ruby's subject is a most timely one. The advertising columns of ophthalmic and general medical journals now are filled with advertisements for certain, if I may say, proprietary lenses, for which much is claimed. There is a very decided discrepancy in the claims of the different manufacturers. Some claim that the lens should remove absolutely all of the violet rays; others claim that that is a great mistake, and that we should have a certain number of ultra-violet rays left. And I feel until there is some scientific accuracy in the matter of lenses that we will do well to hold aloof from the general prescribing of so-called tinted lenses.

There is yet a question among physicists as to the actual changes which take place in the lenses under the influence of the ultra-violet or the infra-red rays of light, and I feel that until there is some actual method of determining just exactly what retinal changes take place in the individual eye we make a great mistake in prescribing so many tinted lenses. If the Lord had intended that all rays of light should be filtered, we would have been provided with a filter. There is no question about that.

Of course, there are certain occupational conditions in which tinted lenses are necessary—glass-blowers, for instance. These men must have special lenses which will absorb the intense rays.

My experience has shown me that the vast majority of photophobias are due to the fact that the patient has not the proper correction, and the majority of these patients, if given proper correction, will get rid of the photophobia very quickly. If you give that patient a tinted lens, regardless, you are going to make a cripple out of him, so far as his eyes are concerned, and he will become utterly dependent upon a subdued light, which is not natural.

There is an instrument now available, and in one of the scientific exhibits to-day, I think, with which the manufacturers claim that you can study the individual retina and determine whether or not you have retinal irritation when the eye is subjected to the different spectrum bands of light. If that is so, we have reached a stage where we can accurately and scientifically prescribe lenses where needed. But the whole thing, to my mind, is that we are making a great mistake if we grasp at this or that lens as being a panacea for every case of photophobia or asthenia that comes to us. We must determine that there is actual retinal irritation, or some change in the eye, which demands protection from light which is absolutely normal and natural, before we use it.

DR. A. B. KNAPP, Vincennes: My experience with tinted lenses has been limited, and I

must say not very satisfactory. I have regarded them more as a commercial fad than as a therapeutic necessity. I am glad to have heard this paper, but I am disappointed, because the essayist does not tell us which color or colors are best. The colors and tints that have been in use are numerous, and for each is claimed superior qualities by its originator, until now we have Crookes' glass, and we are told all others are practically valueless.

The earliest record of the use of colored glass was in 1561, when green colored glass was used; then in 1672 blue glass was made; next was what is now called smoked glass, in 1767. Since then it seems that about all the known colors and tints have been tried out. I am inclined to believe that if we would examine carefully enough all of our cases of asthenopia we could find the cause and apply the remedy. If the nares, including the accessory sinuses, the lachrymal apparatus and the conjunctival sac, are carefully searched, we will frequently find the cause. In no case of asthenopia or photophobia must we neglect the condition of the extrinsic and intrinsic eye muscles, the refraction and the condition of the retina. Next we must look into the environment and the general physical condition of these sufferers.

DR. G. F. KEIPER, Lafayette: I believe that this subject is considerably in a haze because of the fact that up to date we are not expert enough to know how and when to prescribe colored lenses, because of the fact that we are not as yet, as ophthalmologists, able to use the spectroscope. At the foundation of all this work must necessarily lie some instrument of precision, and I believe that we have that instrument in the spectroscope, and that the time is coming when the spectroscope will be as necessary in the office of the ophthalmologist as is the ophthalmoscope or tonometer, or any of the other instruments of precision that we are accustomed to use.

I believe that in certain selected cases colored glasses are necessary, in order to cut out harmful rays of light, but in order to arrive at the conclusion as to the kind of a glass we need, I again say we must resort to some particular form of instrument.

Dr. Newcomb has well emphasized the point that the very first essential necessary is correction of the error of refraction, and with this correction a great many of the irritative troubles immediately disappear, but if they do not disappear then it is necessary to resort to the very thing that the patient needs, namely, the correction in the way of some lens before the eye that will cut out these rays.

Of course there is another field where colored glasses are absolutely necessary, and that is after the use of a cycloplegic for the estimation of refraction, or where it is necessary to

use it for therapeutic purposes. We are all satisfied on that.

We have with us this morning Mr. Poser, of Bausch & Lomb, who has brought a model of a spectroscope showing the ultra-violet rays passing through a grating instead of through a prism. The prism will not show them. It is necessary to pass them through what is known as the screen or grating. Through his kindness we will have a demonstration, in order to show just exactly how these rays of light can be cut out by the different kinds of glass now on the market.

DR. A. E. BULSON, JR., Fort Wayne: It strikes me that there is a good deal of exaggeration concerning the value of tinted lenses. I think this is brought about very largely by the attitude of the optician and the spectacle vender, who use the tinted lens as a sort of cure-all for various affections, and it has a psychologic effect upon the public. I do not believe that a tinted lens has any more than a limited use in the hands of the skilful ophthalmologist. In other words, I believe that the majority of cases of sensitiveness to light, or photophobia, have a foundation that requires our most careful consideration, not alone so far as pertains to the correction of errors of refraction, but the correction of various anomalies requiring general treatment. I quite agree with all that Dr. Newcomb has said concerning this subject. Many of these cases of photophobia as well as asthenopia are due to faulty corrections of errors of refraction. On the other hand, there are a great many of these conditions which require the attention of a good medical man. A tinted lens may be necessary following the use of a cycloplegic or a mydriatic, or for use in certain occupations like welding and glass blowing, and should be employed, but in a large percentage of the cases in which the colored lens apparently has produced relief there is a deeper cause, which we, as scientific men, ought to determine. We should not depend upon a tinted lens to do something that can be accomplished by less objectionable means. I know persons who have worn tinted lenses for years. Oftentimes these tinted lenses have been prescribed for the psychologic effect; perhaps there was a temporary demand to correct some temporary pathologic condition; but, be that as it may, these patients have continued to wear tinted lenses over a series of years, and finally developed a condition of artificial sensitiveness, in which they have felt that they could not dispense with their colored lenses. In a good many years of practice I do not believe that I have prescribed for continuous use to exceed half a dozen pairs of tinted lenses. Quite naturally I put a pair of smoked glasses on the patient who has undergone cycloplegia, or on those suffering from photophobia in various pathologic conditions

under treatment, but the moment those conditions clear up the tinted lenses are abandoned. It seems to me that as scientific men we ought to get at the cause of photophobia or asthenopia, and not be led astray by the specious pleas of the manufacturers who are every ready to have us prescribe tinted lenses when other measures are indicated.

DR. J. O. STILLSON, Indianapolis: I did not have the pleasure of hearing this paper, nor do I wish to differ radically with Dr. Bulson in matters pertaining to the use or non-use of colored lenses. However, in a period of some years' experience I may say that I have very frequently seen cases where a very light tinted lens was a great comfort.

Apart from the colored glasses referred to, I have never had very much experience with tinted lenses, and I have never found any real, just cause for allowing patients to wear them. I refer to the amber glasses, and other glasses of that kind. I have limited my use of colored lenses to a very light A or B blue, just enough to take off the glare of light in those cases where there seemed to be an extreme sensibility to light. I think, though, we do owe it to ourselves and to the patient to follow the line laid down by Dr. Bulson regarding the psychologic effect of a lens. I think we owe it to them to prevent that if we can. Man is a creature of habits, and we must tell these patients that they must not get into the habit of wearing anything unduly.

DR. J. D. HEITGER, Bedford: I think if you will recall the physiologic effect of light on the eye you will know that nature has given us certain refractive media which will absorb the ultra-violet rays. They are put there for a purpose. As light goes through the eye, the cornea, lens and vitreous absorb the ultra-violet rays and produce a fluorescent light, which in excess produces the irritation of which we have heard some discussion this morning. To cut out all the ultra-violet light is bad, but if you have an excess I think it advisable that the excess of light be toned down. There are certain of us who are subject to certain bands of light in the spectrum, and, as Mr. Poser will show us later, it is possible to find out the individual characteristics in regard to the irritation of these special bands of light. If those things are handled in that way there is some scientific basis to it, and we can hope to get some results. As Dr. Keiper has well said, it will not be very long until these instruments are perfected, and will be a very necessary thing in the office of the ophthalmologist. I have had a little experience in this matter, trying it out on myself before prescribing. I am at present wearing what is known as a Noviol lens. In a place as light as this I get a great deal of comfort. I use it merely in a light that is bright. But to use that sort of a lens

as a continual lens, I think, is very much of a mistake.

DR. F. C. HEATH, Indianapolis: I am in accord with what has been said about the necessity of making careful diagnosis so as to ascertain the cause of the sensitiveness to light, and also with regard to what has been said about avoiding the formation of the smoked glass or tinted glass habit. Some of us are going to an extreme in our opposition to the use of tinted glasses. They certainly have a field of usefulness. A large proportion of cases coming to an oculist are neurotics—at least there is a neurasthenic element in the case. Whether you call it a psychologic effect, or something else, they occasionally get relief from the tinted glass which they cannot get from anything else. I could cite a number of cases in which I have had very nice results from the use of the tinted glasses.

There is also another class of people, who work under unfavorable conditions. You may say all you will about improving those conditions—it is impossible to improve them. They are obliged to live under them, and the conditions are something over which we have no control. Working under those unfavorable conditions we must put them in as favorable a condition as possible to overcome the evil effects of the bad ones. In such cases we very often get excellent results by the use of tinted glasses.

DR. CASEY A. WOOD, Chicago: This subject has always attracted me greatly because of the great variety of opinions expressed as to the use and purpose and results from the wearing of tinted glasses, and because I soon discovered that those cases that were benefited by tinted lenses were benefited by such a great variety of tinted glasses. The latter fact always reminded me of a shrewd old general practitioner who constantly got off things to me that I felt it wise to remember. One of his axioms was that a disease that is cured by a lot of remedies has no specific remedy, and I am almost inclined to think that cases of photophobia that are relieved or cured by tinted lenses may be equally cured, in the great majority of instances, by any one of the innumerable forms of tinted lenses now on the market.

Dr. Ruby, and those who followed him, raised the question, which is pertinent, as to the cause of photophobia, and I need not say to you that that symptom has many different causes. I was particularly struck by what Dr. Heath said, namely, that there is a class of neurotics or neurasthenics who are especially sensitive to certain rays of light—not necessarily, mind you, the ultra-violet rays—possibly some other rays in the spectrum, and this sensitiveness to these peculiar rays is not uniform. The consequence is that these neurotics, whether by suggestion—whatever that may mean—or by the direct influ-

ence of colored glasses, are not always uniformly relieved by the same colored glass.

I remember well an incident that happened in my practice. A patient of this sort was having an examination made, and an amber glass was given to relieve the photophobia incident to the use of the cycloplegic. This patient went away without the examination being entirely completed, and with this amber or yellow-colored glass. I saw her three years afterward and she said the glass we had ordered for her was the finest thing she had ever had and that there had been no need for her to come back. She wore this tinted glass and was entirely cured of her photophobia and other conditions from which she was then suffering.

One might talk all day on this subject, but there is one thing I would like to impress on you, and that is this, that probably the most common ordinary cause of chronic photophobia is some form of heterophoria. The difficulty of using both eyes together with ease and without strain may, of course, be associated, as it often is, with a refractive error, but when you correct the refractive error you really relieve the extrinsic muscle difficulty, and there is where the patient gets relief from the photophobia. I think that when a patient comes complaining of photophobia it is especially incumbent on the ophthalmologist to cure or treat or try to relieve a heterophoria, which may not be on the surface.

As to the production of photophobia, I think it is almost always congestion of the vessels of the choroid. There is a reflex arc there, in which the undue amount of light, or improper light, being admitted to the eye through an eye strain, increases the caliber of the choroido-retinal vessels, and it is the congestion of these vessels that produces photophobia.

I was very glad to see that so many men recognized the danger of this slipshod practice of giving colored glasses because the patient complains of photophobia. I think it argues a high intelligence for this section. You see by the advertisements of opticians, and especially manufacturing opticians, that they are encouraged, and the whole trend of thought is in the direction of handing out these glasses for symptomatic relief, which is entirely opposed to all scientific treatment of these cases.

It seems to me it would be unfair to criticize in advance the instrument which Dr. Keiper tells us we will see here, but I don't think I would be doing my full duty to myself if I did not say something that is on my mind, namely, that although in teaching (and a good many of us have taught in medical schools) we compare the eye to a camera, and also the retina and some of its functions to the action of a spectroscope, yet in practice it is entirely wrong, and I don't care how refined your spectroscopic examinations are you never will be able to order glasses

from any spectroscope, because the human eye is something else besides a camera.

My friend, John Hardin, has recently introduced the Noviol glass. The fact is, when any new glass comes out I generally have it made up in my own correction, try it, and that is why I am wearing the Noviol glass. I don't think it is any better than any other glass, as a general thing. It may be adapted to some particular cases. But the proof that the Noviol glass is better than any other glass is the same that is brought forward by all the other manufacturers—French, German, English and American, namely, that it cuts off all the ultra-violet rays or most of them. To me that is no proof at all. You see it cannot be, because the question of photophobia is mixed up with the impressiveness of the patient. You may have a patient affected by a certain kind or form of rays that would not affect other patients. So that the eye is something else besides a spectroscopic instrument, and we are still thrown back on the necessity for carefully investigating all cases of photophobia that come before us and trying to find out the cause and then remove it.

DR. RUBY (closing the discussion): For the benefit of Dr. Bulson and Dr. Heath I can say that coming on the train I had a man with me who was coming up on the business of some picture show company. He has a neurotic temperament, and some trouble, when nervous. He wears a correction of +1.25 in both eyes when he has trouble with his stomach, but never needs it at other times. This corroborates the statement made about the general neurotic condition of these patients.

I wish to thank the gentlemen for opening up the question so broadly. That is what I wanted. I think the thing we have found out from the discussion is what we have tried to make clear, namely, that no one lens will fit all eyes any more than one shoe will fit all people.

I wish to thank Dr. Wood for calling attention to heterophoria. That refers back to our correct refraction.

VERTIGO*

L. D. BROSE, M.D., PH.D., F.A.C.S.
EVANSVILLE, IND.

To the physician, vertigo is a symptom, but to the patient it represents a disease for which he seeks relief and our treatment is valued only so far as it affords this. The intensity and duration of the vertigo may vary from a momentary uncertainty in standing or walking, to complete unconsciousness. The climax of vertigo is vari-

* Presented before the Section on Ophthalmology and Otolaryngology of the Indiana State Medical Association at Indianapolis, Sept. 23, 1915.

able, at times a distinct prodromal stage may be observed during which the patient seeks to protect himself from falling and again the onset is so sudden that it may resemble a sudden attack of apoplexy. The duration may be but a few seconds or many hours, while the frequency varies from a single attack to numerous daily attacks. A concise definition of vertigo is an erroneous conception our bodily position is occupying in space. Sensations of vertigo may represent an impression that our position, say that of lying down and quiet, is on the contrary one of moving to and fro in some indefinite manner, subjective vertigo. Again, the sensation may represent error in our surrounding objects, these seeming to move about us or around us, objective vertigo. Vertigo and equilibrium disturbances are clinically closely connected. It is recognized in medical science that equilibrium rests upon peripheral afferent impulses transmitted from the inner ear, the eye and the kinesthetic sense which includes the skin, touch, muscle, joint and visceral sensations. In normal equilibration these impulses are constantly being transmitted to the brain by these end organs and harmonized subconsciously, but as soon as disharmony is perceived or when the impulses are inadequate for a correct interpretation of our bodily relation, a fear of instability arises which may be termed vertigo.

Physiologically the auditory nerve is made up of fibers concerned in the conduction of sound and fibers concerned in the transmission of impulses that instruct the brain, especially as to the position of the head in space, thus dominating the eye muscles and making possible their readjustment in all head movement. Otologists have given much time and labor to tracing the course of the auditory tract within the skull with a noticeable difference in their conclusions, but so far as the vestibular tract is concerned, and it is with this alone we have to do in aural vertigo, we may accept the following. These fibers are not only intimately connected with Deiters' nucleus but according to Urbantschitsch they extend to the ocular muscles via the fasciculus longitudinalis posterior, to the cerebellum via the corpus restiformis and to the spinal cord via the anterior cornu of the cervical region. Ascending fibers from the cervical ganglia transmit impulses which influence the position the head bears to disturbances of equilibrium but whether these impulses originate in Deiters' nucleus or in the cerebellum we do not know. Aural vertigo may point to a lesion in the external auditory meatus, to lesion in the middle

ear or most frequently to lesion of the inner ear involving the vestibule or semicircular canals. In the external ear we look for tumors, or other obstructions, especially ceruminous impaction. I distinctly recall an instance of the latter where there suddenly developed, one morning in an elderly man at arising time, such violent vertigo that he was unable to leave his bed and sent for me in great alarm. Simple inspection of the outer ear revealed the cerumen and with its removal the vertigo disappeared. According to Lucae, vertigo may set in not only in positive but also after negative pressure in the middle ear; also cholesteatoma, effusions, tumors, inflation of the ear and especially pressure on the stapes may excite it. In labyrinthine disease, notably acute suppuration, vertigo is intense at the start, but gradually decreases after a few days with exacerbations when the head is subject to rapid movements. We differentiate this variety of vestibular vertigo from other kinds by the presence of deafness. Vertigo in a patient who has impaired hearing should excite suspicion that it may be of aural origin. In acute general suppurative labyrinthitis the deafness is total and lasting and invariably in the early stage accompanied by nausea and vomiting. In serous labyrinthitis and circumscribed inner ear disease there remain as a rule remnants of hearing. Other subjective phenomena in vestibular disease are characteristic: the patient feels that surrounding objects are moving about him in a circle rotatory, taking the direction from the diseased ear. With this there is the sensation of falling towards the healthy ear and in attempting to correct this subjective sensation he overdoes it and falls instead toward the side on which the ear is diseased. Because of the great mortality, 70 per cent in acute suppurative labyrinthitis when the disease is not early recognized and treated by operative interference, it may not be inopportune to mention other associated symptoms, such as spontaneous rotatory nystagmus intensified by the patient directing his eyes toward his well ear. Characteristic of spontaneous labyrinth nystagmus is alternating slow eye movement in one direction and rapid in the opposite. Syringing the ear with hot or cold water produces nystagmus and to Barany of Vienna we are indebted for a correct clinical understanding of the aural caloric reaction and the method to be followed for eliciting nystagmus and equilibrium reaction. Syringing the healthy ear with cold water induces nystagmus toward the opposite side with disturbed balance toward the side syringed. The reverse happens

when the healthy ear is syringed with hot water. Changing the position of the patient's head ninety degrees is followed by change in the direction of the nystagmus. In acute suppurative disease of the labyrinth, if the hearing be wholly lost, syringing the diseased ear with hot or cold water induces no reaction. If the lesion instead be one of circumscribed vestibular disease you get the reaction of irritation of the inner ear, which is that of intensification as a rule of the normal ear caloric reaction. The explanation for the rhythmical eye movements rests upon stimulation of the hair cell endings of the nerves in the sacculæ and macula of the vestibule through the fine otoliths contained in the endolymph: the slower eye movement being due to the innervation of the fiber passing to the abducens and oculo motor nuclei, while the rapid movement is looked on as the result of a supra nuclear brain stimulus. The turning test and galvanism may also be used in bringing out nystagmus and equilibrium information. In the former the patient is seated on a revolving chair with a handle attachment for setting the chair in motion. With the normal ear, turning the person to the right in the upright position of the head, produces horizontal nystagmus toward the right, while the chair is in motion and a shorter duration horizontal nystagmus toward the left when the chair is stopped. A change in the position of the head of ninety degrees is attended with change in the direction of eye movement, for example, if the head be made to rest on one or the other shoulder the eyes undergo rhythmical movements upwards for the right shoulder while the chair revolves and downwards when the turning ceases. In acute suppurative disease of the labyrinth when the patient is revolved toward the diseased ear you get either no nystagmus or but short and transient one, and when the turning has ceased the nystagmus is toward the sound ear with increased intensity and duration; the latter being the so-called after nystagmus. Normal galvanic reaction is obtained by stimulating the vestibule of the healthy ear by means of the kathode pole in front of the tragus. According to Mackenzie, with a four-milliamperé current kathode in front of tragus, say right ear, you get rotatory nystagmus to the right, while with the anode pole same ear you get rotatory nystagmus to the left. In case of labyrinth suppuration, say right inner ear, the kathode pole in front of ear and a current of 8 ma. or more produces no reaction, while the same pole with current 4 ma. or less will elicit reaction when used in front of the

other ear. After secondary degeneration of the vestibular nerve has taken place it is not possible to obtain either kathodal or anodal reactions from the diseased side. Lastly, the equilibrium may be tested by noting the steadiness in position with open and closed eyes; the steadiness or tendency or not to fall toward the affected side in jumping with feet and knees in apposition if the eyes be closed; and the pointing test, the error in pointing being toward the side of slow component eye movement.

Thus far no mention has been made of what is termed Ménière's disease, which is of very infrequent occurrence. It is sudden in onset and always attended by sudden deafness, tinnitus and vertigo, associated frequently with nausea, vomiting, faintness, syncope and profuse sweating. The ear lesion is one of acute labyrinthine hemorrhage or exudation. A clinical picture resembling Ménière's disease is seen at times in chronic labyrinthine disease and irritation of the inner ear from extra labyrinthine lesion. In these patients the symptoms are more gradual in onset and not so intense. Tinnitus aurium has been present for some time with gradual increase of deafness; then vertigo occurs which may be alarming and paroxysmal in nature. Vertigo from seasickness, riding in an elevator, swinging and railway travel is probably the result of labyrinthine disturbance. Deaf persons are said to be immune to seasickness. Ocular vertigo may be extra-ocular as well as intra-ocular in origin. Of the extra-ocular causes perhaps diplopia is the most frequent though it may occur when vision is performed by the paralyzed eye alone. In this case so long as the eye fixes the direction of gaze without calling into action the paralyzed muscle the objects are seen in proper position. Just as soon, however, as the gaze is turned into the field in which the palsied muscle is called into action the brain locates the object too far toward the lame side with the result that objects appear to move with constantly accelerated velocity in the direction in which the eye is attempting to move. Spasm of the extra-ocular muscles may likewise occasion diplopia and vertigo because of false projection. In such cases the location of the object falls too short, just the reverse of that after paralysis. Prisms too strong or too weak placed before the eyes by calling forth double vision or increased fusion impulse produce vertigo much like that of paralysis or spasm of the extra-ocular muscles. Paralysis of the ciliary muscle or the use of too strong convex or concave lenses occasion false projection, objects appearing either too near or too far with symp-

toms of vertigo. Astigmatic lenses occasion like dizziness when worn at improper axis because of distorted retinal images. Occupational nystagmus seen in miners, typesetters and others who use their eyes for a long time in a constrained position begets vertigo. Additional intra-ocular conditions reported as giving rise to vertigo are acute glaucoma or the reverse condition that of sudden lowering of intra-ocular tension through evacuation of the aqueous humor. Lucae reports optical vertigo in a patient where increased pressure within the tympanic cavity produced strabismus through reflex irritation of the abducens nerve. This nerve bears a close relation with the superior olivary body which lies in the path of centripetal conduction from the vestibular apparatus. Characteristic of all ocular vertigoes is their disappearance as soon as the eyes are closed or the patient has learned to correct his faulty projection by altering the position of his head. Following Panse, the kinesthetic sense embraces the muscular, joint, skin and visceral sensations which have to do with orientation and equilibration. The vertigo that results through falsification of impulses from these end organs differs in character and intensity from ocular vertigo in that closure of the eyes exaggerates the vertigo while at the same time the individual has the feeling of being improperly placed in space. The various tracts of the nerves which transmit these impulses through the spinal cord are not nearly so well defined as are those connected with the eye and ear. Interruption in the spinal cord of Burdach's and Goll's column seen in tabes and multiple sclerosis, hemorrhages and myelitis impair the muscular sense and the sense of touch. Here we may meet with ataxia without vertigo. A well known form of vertigo of visceral origin is that connected with functional derangement of the stomach. It frequently comes on in paroxysms, may be at night or in the early morning hours, and is associated with dull heavy ache in the head and with more or less gastric distress following indiscretion in diet. The tongue may be clean and the digestive disorder so slight that only through the relief afforded by dieting and medication are we able to correctly interpret the cause of the vertigo. Other cases are more chronic in character and giddiness may be felt for long periods with only short intervals of relief. In this condition food and stimulants are apt to relieve the disorder which apparently arises from delayed digestion and may become aggravated with severe spells of dizziness if the person go for a long time without eating. Acute gastric vertigo is excited

in some individuals whenever they partake of certain kinds of food such as crabs, oysters, ice cream, etc. In other instances after over-feeding the individual has a sudden attack of acid stomach, objects whirl around him, he has buzzing in the ears and at times may be double vision with inability to concentrate the mind, all of which creates terror, mental confusion, almost unbearable until cold sweat, nausea and evacuation of the stomach bring gradual relief. This form may repeat itself until the patient reaches a state of mind bordering on great fear, the brain becoming so endowed with morbid susceptibilities that to encounter crowds or see moving bodies brings on vertigo. Emotions or decided mental effort may precipitate it. I cannot leave the subject of gastric vertigo without mentioning that some writers deny the possibility of its being gastric in origin. Gowers is of the opinion that in most of these patients the vertigo on careful examination would reveal the presence of auditory defect and bases the anatomic proof therefore on the nerve connection of the auditory vestibule via Dieters' nucleus and the pneumogastric nerve. Others again, while admitting that the ingestion of certain toxic substances brings about vomiting with vertigo connect the evacuation of the stomach with the vertigo, claiming that through absorption of toxins central or aural disturbances follow and these in turn produced the vertigo. Constipation, suppression of menstruation and inflammation of the nasal accessory sinuses have been reported as causes of vertigo. Laryngeal vertigo likewise denied by many has been described by Charcot and others. The attack occurs without warning in the midst of perfect health. It may come on while the person is working, sitting, standing, walking or even lying down. Sometimes the patient is awakened at night by slight cough, sits up in bed and has an attack which begins with tickling in the throat followed by coughing and loss of consciousness for a few seconds; the breathing stops and the face becomes cyanotic. The patient does not feel unwell after it is over and when questioned states he has had an attack of coughing. A connection with clipepsy has not been established. The introduction of a sound into the larynx can bring on an attack, while if the mucous membrane of the larynx be first rendered anesthetic by cocaine no attack follows the passage of the sound. Impulses conveyed through the three peripheral sense organs are subconsciously correlated in the cerebellum and in such a way that after a time vertigo produced through irritation or functional derangement in any one may disappear because of

compensatory afferent impulses received from the other two. The cerebellum then may be termed a central station of equilibrium acting subcortically and without consciousness. The eye movements, in particular, furnish us with a clue to disease in this part of the brain. The centrifugal conduction of the superior cerebellar tract is demonstrated by the direct communication of the upper olivary body with the nucleus of the sixth nerve and those cerebellar fibers which pass in the anterior peduncles to the ocular motor nucleus. According to Hitzig it now seems to be the general opinion that vertigo is always present when the basil part of the vermis and especially its posterior parts are diseased. Such vertigo is usually absent in the horizontal quiet position of the body, but becomes accentuated as soon as the patient sits up or moves about. Disturbances of the anterior cerebellar peduncle cause erroneous transmission to the cerebrum of the impressions formed in the cerebellum about our position in space and vertigo may result. On the other hand, injury, from pressure or traumatism, of the cerebral fibers of the middle cerebellar peduncle may so interrupt the control of the cerebrum on the cerebellum as to create vertigo. "Mills agrees that it is true that vertigo and nystagmus are often seen in disease of the cerebellum, but whether as a true cerebellar symptom or the result of disturbed vestibular function still remains unsolved and is largely to be determined by a study of each case." He further states in cerebellar disease you have what he terms trunkal gait, rather than reeling gait with incoordination of the eye movements; the eyes are never at rest and no two successive movements are alike with forced use of the cerebrum seeking to compensate impairment of disturbed cerebellar action. Equilibrium disturbances, cerebellar in origin, differ from those of vestibular origin in that the strict relation between the character and direction of the nystagmus and the direction of the disturbances in equilibrium are lost. You may alter the position of the patient's head without changing the direction of his falling. Cerebellar disturbances have this feature in common with hysteria and neurasthenia. Central vertigo results from circulatory disturbances, from toxins or poisons acting on the brain substance and from pressure. It presents the combined features of all three peripheral sense forms but less distinct, less defined than any one of them, because the exaggeration or suppression of impulses are general so that all centers are more or less affected. An exception to this rule may be seen in disease of the

blood vessels where certain vessels may be more affected in certain localities than in others with the result that the vertigo presents characteristics of one primary form more markedly than the other two. The vertigo appearing in diseases of the cerebrum is associated with more or less complete loss of consciousness, the patient suddenly experiences obscurations such as blurring of sight. False impressions about his relation to surrounding space do not occur. Attacks of cerebral vertigo may be seen in congestion of the brain, cardiac hypertrophy, chlorosis, pernicious anemia and various toxemias; with acute infectious fevers; and such cranial diseases as progressive paralysis, multiple sclerosis, Freiderich's disease, hydrocephalus and tumors. Change in position from lying down to sitting up aggravates the vertigo. Finally, we mention neurasthenic and hysterical vertigo. In pronounced neurasthenic states where there is not so much a lack of corpuscles as deficient hemoglobin, vertigo is a frequent symptom and may result either because of functional central disorder or gastric or optical trouble. The dizziness may not be profound but very obstinate and almost the last of the manifest symptoms to get well. Hysteria may have vertigo as a symptom and not preclude the presence of aural, ocular or kinesthetic sense disturbances as the starting point for a train of hysterical disorders. Again we may have hysterical vertigo simulating one of the other described types of dizziness. Nearly all cases of injury with cerebral concussion complain of vertigo and disturbed equilibrium. In the diagnosis of traumatic neuroses nystagmus is of great importance because the disturbances of equilibrium do not follow the rule of the normal ear or else greatly exaggerate this rule.

DISCUSSION ON THE PAPER OF DR. BROSE

DR. GEORGE F. KEIPER, Lafayette: Vertigo is due to more causes than those mentioned by the essayist. Of course the causes that he mentioned are those with which we most likely are compelled to deal, but I believe that in a discussion of this kind we should notice all the causes that are liable to produce vertigo, because we are not dealing with a special organ, but with the entire organism.

Dr. Brose has said that vertigo may be due to the eyes, ears, nose, throat, conditions in the stomach, in the pharynx; it may be due to conditions in the gastro-intestinal tract, hepatic, uterine, ovarian, and may be due to tumors of the brain.

I want to touch on some points with reference to the disturbances due to the eyes that produce vertigo. The doctor has mentioned that it may

be due to paralysis of the ocular muscles. Most likely it is due to imbalance of the vertical muscles. It also may be due to accommodating strain, or muscular insufficiency, and about 12 per cent. of all asthenopic cases will show it. It may be due to near work, and relief is sought in the closing of the eye, when the vertigo ceases. The vertigo that is due to eye strain differs from that due to vestibular trouble in nystagmus. Nystagmus is equal in all directions, whereas in labyrinthine vertigo it is accentuated by the turning of the eyes in extreme direction either way. Dorr has called attention to the fact that glaucoma may be the cause of vertigo. He claims that 25 per cent. of all cases of glaucoma will show vertigo. Moreover, patients who are blind with glaucoma will also show it, which is somewhat contrary to our accepted belief that blind people will not suffer from vertigo. That is worthy of investigation, and we should pay more attention to glaucomatous patients, with that idea in mind.

So far as aural vertigo is concerned it may be due to chronic hyperplastic otitis media or otosclerosis, vestibular irritation and also vestibular paralysis. The auditory nerve has two branches, the cochlear branch, which has to do with hearing, and the vestibular branch, which has to do with equilibrium. The doctor has given the anatomy of that, and I will not presume to go over anything that he has mentioned in his paper.

I do wish to mention the fact that coming from the bulb there are three tracts: First, the vestibulo-ocular branch; second, the vestibulo-spiral branch; third, the vestibulo-central branch. If one tract is interfered with we have vertigo, although the other two tracts may compensate for the loss of the tract.

I already have mentioned that auditory vertigo is accompanied by nystagmus, and has two components—a rapid and a slow, which are weakened by looking in an outward or inward direction. It differs from ocular vertigo. In dealing with these cases, inasmuch as we do not see a large number of them, we must keep all of these facts well in mind.

I carry with me all the time a little device, given me by Wilson, in order to get the relationship of the semicircular canals to each other. I will pass it around for you all to see. It can be easily carried in the pocket. It enables you to project the labyrinth or semicircular canals on to the outside of the head. Holding it up while examining the patient you are able to get a pretty clear idea of the things you cannot see.

The vertigo is exceedingly sudden in circumscribed labyrinthitis and in secondary labyrinthitis, in injury of the labyrinth, and also in Ménière's disease.

Dr. Brose has said something with reference to laryngeal vertigo, and we also see these cases

once in a while where they will have an attack on the street, with an intense sense of constriction of the throat and fall, but as rapidly recover themselves and apparently go on their way just as though nothing had happened.

So far as the nasal causation is concerned we sometimes find that vertigo comes as the result of hypertrophy of the turbinal bones, with pressure upon the septum, in sinus diseases, and also in spurs. In the pharyngeal cases an elongated uvula is sometimes the cause of the disturbance, and may be the cause of some cases of laryngeal vertigo, the patient suffering because of the irritation of a very long uvula dipping down into the larynx and in that way causing trouble.

DR. JOSEPH D. HEITGER, Bedford: This is such a wide subject that one would hardly have time to more than take up one phase of it. One phase has appealed to me because I have had occasion to meet it in practice three times in the last year of practice. I don't know whether that experience is unusual or whether these cases are occurring and we don't notice them because we don't know enough detailed information regarding the labyrinth and its connection with the brain.

The conditions that I would speak of are retrolabyrinth conditions and conditions of auditory neuritis. We have, as you know, a type of acute diseases of the branches of the labyrinth, one in which, the cochlear branch, alone is affected, and one in which the vestibular branch is affected. The cochlear branch can be affected without the vestibular, and vice versa. Between these two acute types of cases we have, I might say, the little understood polyneuritis forms, which have been called the polyneuritis of Schönborn and the polyneuritis cerebialis menieriformis of Frankl-Hochwart. The latter is an acute affection, in which we get involvement of the fifth, seventh and eighth nerves. There are undoubtedly a great many cases of so-called rheumatic facial paralysis which, if carefully examined by the Barany method, will show involvement of the cochlear branch or the vestibular branch, or both, and I would advise all of you, in the future, if you see any of these cases of so-called peripheral facial paralysis, if you possibly can, examine the auditory labyrinth and the fifth nerve. These cases are very hard to work out. You will find that when you start to investigate them. You must do a lot of thinking and keep eternally at this labyrinth proposition. It is a very complicated thing, and requires constant study, and unless you keep in constant touch with it, these cases are going to go by you. I think that the future development of this phase will do very much to clear up the proposition of vertigo, especially of aural nature.

DR. BROSE (closing the discussion): I have not much more to say except that in the preparation of this paper I had in mind calling your attention to some of the more recent methods of investigation in a field wherein surgical otology has been claiming an ever-increasing interest. Perhaps, as otologists we have been a little over enthusiastic in estimating the value of these methods. At any rate Dr. Cushing of Harvard, states that after sending a representative to Vienna to be personally instructed in the methods of examination used there, he has found these methods to be not at all reliable in arriving at correct diagnosis.

I think there is much more work to be done before this question of vertigo and the part that labyrinth irritation performs reflexly in the symptomatology are thoroughly understood. That work, I feel, can be carried out best if we get the cooperation of the neurologist and surgeon.

DISEASES OF THE STOMACH AND DUODENUM

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William J. Mayo, in speaking of this all-important subject said: "Few people with chronic diseases die from the malady with which they suffer during life. Postmortem information as to the cause of death has usually disclosed that death was due to secondary complications and terminal infections."

Postmortems can not show living pathology, hence can not present a true picture of diseases in the curable state. Postmortem findings are very accurate in a lot of diseases, but in chronic gastric disorders, unless death comes from an acute exacerbation, we are not so fortunate. So it remained for surgery to give the profession a living pathology of the diseased conditions of the upper abdomen that has revolutionized former opinions and demanded a readjustment of our former knowledge.

Likewise surgical measures have illuminated pelvic cellulitis and pelvic hematocele, showing them to be tubal infections and extra-uterine pregnancies.

Phlegmonous enteritis, obstruction of the bowels, general septic peritonitis, perityphlitis and a host of other things were proved by surgical means to be, in the large majority of instances, appendiceal inflammation. The pathology of the obscure corners of the abdomen, biliary tracts, pancreas, etc., has been brought to light only by surgery.

The stomach has been credited with a host of diseases which it never possessed and has received a lot of treatment for a host of supposititious conditions which it never had.

Ewald, the man who did so much to develop the chemistry of the stomach, has page after page of description of these supposed conditions. Our mistreatment of these conditions have been due mainly to a misconception of the fundamental function of the stomach, its relation to diseases in general and especially to the digestive tract.

The stomach is much like the urinary bladder in this respect, the supposed diseases of which has been so reduced since the cystoscope, ureteral catheter, Roentgen-ray and other means of direct inspection have come into general use. Tuberculosis of the kidney was called intractable cystitis; the unimportant bladder by its involvement gave all the symptoms and secured all the treatment.

Why was the male believed to have so much bladder disease? It was because of enlarged prostate, posterior urethritis, and kindred diseases. The same can be said of the stomach. The stomach is the "scape goat" that delivers the calls of distress or pain for a multitude of other organs, yet it is not the real source of the symptoms.

The Roentgen ray with the fluoroscope has demonstrated the motility of the stomach beyond anything we dreamed of in the past and has definitely proved Ewald's opinion that motility was one of its most important functions. The most important function, however, is storage. This organ acts as a magazine of a base burner, feeding its contents slowly into the intestines for digestion and assimilation. The food, which is largely mixed with ptyalin in mastication, lies in the fundus of the stomach twenty or thirty minutes, being macerated in a globular mass. The gastric secretions being largely in the pyloric end, the food is well mixed before it is passed to this portion and only in small quantities at a time.

When a certain degree of acidity exists in the pyloric antrum, the pylorus opens and the chyme passes into the duodenum, and when a certain degree of acidity takes place in the duodenum the pylorus automatically closes. It should not be forgotten that the duodenum has a paramount control over the pyloric apparatus, and it is also shared by all the derivatives of the midgut down to the splenic flexure of the colon. This is why the stomach is made a mouthpiece for the ailments of the derivatives of the midgut—pyloric spasm.

We must not forget that motility and storage are the greatest functions of the stomach, and anything that interferes with this function causes marked disturbances of the stomach. We have paid relatively too much attention in the past to the chemistry of the digestive process and too little to the more important function of motility.

The first 4 inches of the duodenum, the part lying proximal to the common duct, originates like the stomach, from the foregut and its function and diseases are those of the stomach rather than the intestines, although morphologically it resembles the small intestines.

Since we have thus previously considered the normal and its functions we will turn to the diseases. I believe as doctors we make more mistakes by lack of proper examination of our patients than from any other cause, especially lack of knowledge.

The diseases of the stomach and duodenum, according to Murphy, logically fall into four classes:

1. Disturbances from general conditions as cardiac insufficiency, arteriosclerosis, chronic nephritis or making a diagnosis of gastric ulcer from a gastric hemorrhage caused by a cirrhotic liver. Not a few patients with gastric crisis due to *tabes dorsalis* have been subject to gastrojejunostomy for supposed ulcer. Vomiting of pregnancy is another condition. These are a few of the systemic disturbances that produce stomach symptoms.

2. Gastric disturbances due to diseases more or less intimately associated with the alimentary tract; for example, atonic dyspepsia, prolapse of stomach and gastric neurosis. Atonic dilatation gives rise to a splashy stomach. Roentgen-ray photographs show a marked downward displacement, but this does not mechanically interfere with the process of the food. Gastric neurosis is a common condition of which two types are worthy of mention: first, the female from 17 to 24 years of age, who vomits as soon as food is taken into the stomach, and the middle-aged man with constant gastric complaint of hypochondriac type. Atonic dilatation and prolapse are seldom benefited by operation.

3. The disturbance of the stomach due to appendicitis, gallstone, intestinal tumor, intussusception, intestinal tuberculosis, etc. These have been discussed and will require surgical interference.

4. A small group of cases in which the stomach is actually involved in diseases that can be demonstrated surgically, of which ulcer and cancer are the most frequent examples.

The first step in diagnosis of supposed diseases of the stomach should be a general physical examination to eliminate gastric diseases which originate outside the digestive tract. We should eliminate the nonsurgical diseases, that is, atonic dilatation, gastric neuroses, etc. Next the diseases of the digestive tract outside the stomach. Then go after the diseases which can be rightfully attributed to the stomach. Stomach tubes and test meals will only negatively help you in diseases of the appendix and gallbladder.

Now the history of the patient becomes of great importance, particularly in relation to the early symptoms when secondary complications do not obscure the real characteristics of the disease. Then the test meal given, some hard food that will demonstrate food retention. But remember the laboratory findings must compare to and be taken in consideration with the clinical findings. The Roentgen ray and fluoroscope to give the shape, motility and delivery of the stomach, and this is best accomplished with the patient in an upright position. Chronic ulcer of the stomach and duodenum and cancer of the stomach are the real conditions that need surgery. Eighty-four per cent. of the ulcers are in the duodenum; 1⁶ per cent. in the stomach is the ratio found at the Mayo clinic.

In observing the relation which food bears to ulcers we find that previous to the stage of obstruction, food gives relief to pain, which is the most intense when the stomach is empty. The patient takes food or other diluents or bicarbonate of soda to get relief by neutralization of the retained acid secretions. The patient with other characteristic stomach disturbances who wakes up in the night with bitter, acid, sour feeling in the stomach, and raises up a mouthful of this burning secretion, or is compelled to take food or drink for acidity, in the majority of instances will have a demonstrable ulcer.

One of the peculiar features of ulcers of the stomach is the deceptive improvement which is so often taken for a cure, and which has apparently little relation to the actual condition of the ulcer. This is chronicity.

Cancer of the stomach is the most common of all cancers of the body, as no less than 30 per cent. occur in the stomach. They are amenable to surgical treatment, with good prospects for cure if patient can be submitted to operative treatment sufficiently early in their development. Cancer of stomach does not produce symptoms of cancer during the curable stage but rather those of ulcer. It is in cancer of the stomach that the prolonged laboratory investigation has

produced so much harm. A scientific but deadly delay.

A suspicion that there is cancer should above all lead to a surgical consultation. These cases have no more business being treated medically than has cancer of the lip, breast or uterus.

A high degree of technical skill is not required in order to palpate a gastric tumor or to make a diagnosis of mechanical obstruction. If the patient is told to take with his food some half-cooked rice and a penny's worth of raisins, given with the evening meal, remnants of this food will be found in the morning if obstruction exists.

Modern surgical methods have developed a safe technic for the radical removal of gastric cancer, with good prospects for cure, and it only remains for the profession to recognize the facts and give the patient a chance.

NOTE.—With due credit to Mayo and Murphy clinical publications.

INTRASPINAL TREATMENT OF NEUROSYPHILIS *

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Since February, 1913, when Noguchi announced his discovery of the *Spirochaeta pallida* in the brain of individuals who had died from general paresis our knowledge of syphilis of the central nervous system has developed quite rapidly. Abundant proof is at hand now to show that those nervous diseases which have been classed as parasyphilitic are really diseases due to the same agent that causes syphilis anywhere in the body. Therefore the idea must be accepted that all forms of syphilitic infection of the nervous system must be regarded as such no matter what may be the clinical picture. It is not so important to know whether a case should be labeled tabes, or paresis, cerebral or cerebrospinal lues, as it is to recognize that it is a case of neurosyphilis. The cause is the same and the treatment is essentially the same in every case of that type.

Recent clinical and pathologic studies of neurosyphilis have shown that the disease may affect either the interstitial tissue, namely, the meninges, blood vessels, and so on, or it may affect the parenchymatous tissue, namely, the nerve cells or neurones and their processes. Both of these tissues are involved more or less in every case, but generally one or the other suffers the brunt of the destructive process. In cases manifesting the symptoms of tabes or

paresis the parenchymatous degeneration predominates, but in cases of cerebral or cerebrospinal lues, syphilitic meningitis, and so on, the interstitial degeneration predominates. Differences in the symptomatology are thus found to be due to differences in the localization and distribution of the specific lesions.

When and how does the nervous system become affected during the course of a luetic infection? Until very recently no definite answer could be had. There is still much to be learned about that aspect of the disease, but as a result of the recent studies of Udo Wile and others some knowledge already has been gained. In syphilitic infection there is a period of incubation lasting on the average from one to three weeks. Then the initial lesion appears, and from then on the infection becomes generalized. The disease must then be regarded as a general infection with the *Spirochaeta pallida*, just as typhoid fever is a general infection with the *Bacillus typhosus*, or just as pneumonia is a general infection with the pneumococcus. Once the germs enter into the general circulation they can be carried to any part of the body, so that infection of the nervous system may occur at about the time of or after the appearance of the initial lesion. The spirochete is a very actively motile germ, and its motility no doubt helps it to reach areas that are relatively inaccessible. After the spirochetes have invaded the nervous tissues the battle between host and parasite starts up and continues until one or the other succumbs. The final outcome depends on the virulence of the germ, the resistance of the individual and the efficacy of treatment.

Since the nervous system can become infected so soon after the disease is acquired, how can one tell at which stage the nervous system becomes involved? Is there a method by which one can make a definite diagnosis of neurosyphilis, a method that will enable one to recognize the disease in its earliest stages? This is a question that should be emphasized, as its importance cannot be exaggerated. Early diagnosis in this disease is just as important as in malignant disease, for, like cancer, neurosyphilis in its early stages is curable. When the patient has gone on to the condition in which he presents a fairly typical clinical picture of tabes or paresis or cerebrospinal lues or whatever form of neurosyphilis it may be, too much irreparable damage already has been done.

The presence of one or more of the early signs and symptoms of neurosyphilis in an individual whether he gives a history of specific infection or not is evidence that must be considered as strongly suggestive. The idea to bear

* Read at the meeting of the Northern Tri-State Medical Association in Toledo, Ohio, Jan. 11, 1916.

in mind is that a diagnosis can be made by an examination of the spinal fluid. An early diagnosis can be made in that way, for the findings in the spinal fluid very often tell one more than the clinical findings. The specific changes in the spinal fluid that are diagnostic are (1) an increase in its globulin content, (2) an increase in the number of cells it contains, and (3) a positive Wassermann reaction. These changes in the cerebrospinal fluid of an individual indicate syphilis of the central nervous system.

Until recently the treatment of neurosyphilis was not very satisfactory. In spite of the most vigorous antisyphilitic treatment many cases would continue to get progressively worse. In those cases our therapy seemed to be of no avail. The reason for this has been found. The chorioid plexus acts as such an effective barrier that practically none—or at most only a negligible amount—of the drug introduced into the body gets into the fluid bathing the cerebrospinal axis.

Obviously the surest way to overcome this barrier effect of the chorioid plexus is to introduce the curative substance directly into the cerebrospinal fluid. In that way the drug is carried directly to the seat of the disease and can reach areas that are relatively inaccessible. The substances used at present are (1) minute doses of salvarsan or neosalvarsan, (2) salvarsanized serum, and (3) mercurialized serum.

1. Neosalvarsan in doses of 0.5 to 12 mg. dissolved in distilled water, saline, blood serum or spinal fluid has been used in quite a few cases. There seems to be great danger in the intraspinal use of this drug, for the reactions are generally extremely severe and in a few reported cases death has resulted.

Recently the injection of a very minute known quantity of salvarsan dissolved in human blood serum, the so-called Ogilvie method, has been advocated by such workers as Fordyce, Stoner and others. Wile advocates using the salvarsan solution mixed in the patient's spinal fluid. The doses used are very small, and no severe reactions seem to follow the use of very small doses by either of these methods.

2. The use of salvarsanized serum, introduced by Swift and Ellis, has been taken up quite generally, and if the drug could be obtained as desired this serum would be at present the most widely used remedy for the intraspinal treatment of neurosyphilis.

Salvarsanized serum is prepared as follows: A dose of salvarsan or neosalvarsan is given intravenously. After a certain length of time, varying from one-half to one hour or longer,

enough blood is withdrawn from the patient's vein to yield the desired quantity of serum to be injected. This serum is heated to 56 C. (132.8 F.) for one-half hour, and is then ready for use.

In the technic of injecting the serum the important point is strict asepsis. It does not matter whether one uses the gravity method, or the system of tubes devised by McCaskey, or the simple syringe method suggested by Warfield. So long as too much force is not used it does not matter what method one uses to get the serum into the spinal canal.

The reactions following the intraspinal injection of this serum vary considerably. In some cases they may be very severe; in others they may be very mild. The more advanced cases often show the most severe reactions, but this is by no means an invariable rule.

The clinical results obtained with this method of treatment are very encouraging. I do not hesitate to say that we can obtain results heretofore believed impossible. I believe that the early cases can be cured, and in some of the advanced cases we have seen definite symptomatic improvement coincident with a return of the spinal fluid to normal or an almost normal condition. The exception are the cases of general paresis. They seem to progress in spite of the most rigid and persistent treatment.

3. The latest remedy advocated for intraspinal use in Byrnes' mercurialized serum. This serum is available now in sealed, sterile ampoules, ready for immediate use like all other therapeutic sera, and it may be injected into the spinal canal either by gravity or direct from a proper sized glass syringe.

From my experience I am inclined to believe that one can obtain with mercurialized serum clinical results that are just as good as those obtained by salvarsanized serum. It has been suggested by Swift and Ellis that possibly by alternating the one serum with the other better results might be obtained than by using only one kind of serum. The reactions following the use of this serum also vary considerably, and on the whole are no milder nor worse than those following injections of salvarsanized serum. The advantages in the use of mercurialized serum are (1) it is available already prepared for immediate use, and (2) no preliminary intravenous injection is necessary. If in a case of neurosyphilis suitable for intraspinal treatment the blood Wassermann is negative no intravenous treatment is indicated. The value of a specific serum such as this which can be obtained already prepared for direct injection into the subdural space in such a case is very evident.

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EDITORIALS

CLINICAL EXAMINATION OF THE
BLOOD

Any abnormal change in the body causes an abnormal change in the blood. No matter what the nature of the change may be, whether it be infectious, metabolic, chemical, physical or what not, the blood undergoes a corresponding change. Examination of the blood, therefore, ought to be of great help in attempting to determine the nature and extent of pathologic changes.

Considerable advance already has been made in our knowledge of the blood in various infectious diseases. By an examination of the blood we can in some cases discover the presence of the infecting organism. In other cases we can detect by special tests the presence of specific antibodies. By an examination of the white blood cells, both as to their total number and their variety, additional very valuable information may be obtained. Such is the state of our knowledge now that the intelligent physician in practically every case of infection instinctively turns to the blood examination as his greatest aid in diagnosis and prognosis.

In certain other types of disease the presence or absence of specific ferments in the blood constitutes an important link in the chain of clinical evidence. The study of the specific ferment activity of the blood has only just begun, but already the value of its practical application clinically has been established. The possibilities in the further development of this phase of the clinical examination of the blood seem almost unlimited. Our present methods of detecting and studying these ferments, however, are so technical and delicate that they cannot be applied generally.

The attention of clinicians has now been turned in the direction of the chemistry of the blood. Practical clinical methods that can be carried out quite easily are being worked out for examining the blood for some of its chemi-

cal constituents. The determination of the non-protein nitrogen of the blood, of the amount of urea, uric acid, creatinin or sugar which it may contain brings out in cases of certain types information that may be not only diagnostic but also most reliable as a basis for prognosis.

Another phase of the newer work is the introduction of practical methods for determining the alkalinity of the blood. Acidosis has always been a rather vague term, one that never has been fully worked out or understood. Not infrequently in obscure cases of intoxication which seem to be typical cases of acidosis no abnormal acids can be demonstrated in the urine. In diseases such as nephritis, diabetes, secondary anemia, malnutrition, and so on, the determination of the degree of acidosis by an examination of the blood would serve as the best indication not only for prognosis but for treatment as well.

There is every reason to expect further advances along these lines. Surely the scientific study of the chemistry of the blood ought to yield results of the greatest practical value to clinicians. The clinician must do his part in keeping himself informed of the progress made in this field of clinical medicine. Not only that, he should also familiarize himself with the more practical laboratory methods of making these examinations, and he should apply them whenever necessary. The blood contains many clinical secrets; in order to unfathom them the physician must turn to the blood. When enough attention will have been given to the study of the blood the physician will be surprised to find out how much "blood will tell."

THE FREE CLINIC AT ANN ARBOR

Those in charge of the University Hospital advance the statement that they admit only those who are financially embarrassed and who present a letter from their family physician stating that they are worthy of care for which they are unable to pay. The statement is further made that such patients are operated on before the class. This rule governing admittance is a good one and would call forth no complaint were it but lived up to and enforced. It is apparently an obsolete and convenient regulation. From the patients admitted from one community as a basis, we are inclined to the opinion that not a single week passes during which two or possibly more patients financially able to pay for all services, are admitted and operated on in the University

Hospital without the making of a surgical charge. That the sole reason for these patients going to Ann Arbor is to escape paying the fee of a local doctor and surgeon. The problem is a difficult one for the university authorities and the profession to solve. It can be solved and the imposition abated if the university operators will rigidly enforce the rule and build up their clinics from worthy poor patients and no longer abet the scheming patient who seeks to avoid an operative fee.—*Journal of the Michigan State Medical Society.*

The medical profession of Michigan has long suffered from the free clinic at Ann Arbor. The Board of Regents had contended that the clinic should be free to any one inasmuch as the taxpayers maintain the university. Evidently they forget that physicians are entitled to some consideration, and the university has no moral right to enter into unfair competition with the very physicians that the university takes money from to educate. The free clinic everywhere is shamefully abused, and there is no excuse for it, as it is quite possible to eliminate the patients who are able to pay. But if Michigan doctors have suffered how about the doctors in the northern part of Indiana and Ohio who also have suffered, as the free clinic at Ann Arbor apparently asks no questions when well-to-do patients from Ohio and Indiana present themselves for attention and invariably with the idea in view of avoiding payment of a just fee to home physicians. Even if the Board of Regents consider themselves under obligations to treat gratuitously residents and especially taxpayers of Michigan, there is absolutely no reason why they should follow that course with patients who pay no taxes in Michigan and do not in any way contribute to the support of the University of Michigan. In some instances the family physicians are responsible for this abuse, for with a mistaken idea of gaining favor they refer patients to the free clinics for operation or other special attention. Such a policy is short sighted and later returns to plague the physician who adopts it. But the free clinic evil is a blot on some of our universities, and efforts should be made to correct the evil that is being done. No one objects to the free clinic serving the worthy poor, but no community should be pauperized through free medical service to its well-to-do people, and the capable and conscientious physician who has spent much time and money in equipping himself to care for suffering humanity should not be called on to enter into competition with the free clinic.

QUESTIONABLE ADVERTISING

The Indiana Press Association might, with profit, follow the example of the Louisiana Press Association in going on record against questionable advertising, especially as it refers to "patent medicines" and to quackery. It takes a little moral stamina to adopt the right course when it means, on the face of it, a loss of money, but in the long run it pays, to say nothing of creating a feeling that the public is being served conscientiously. The "Tanlac" advertising campaign, now so conspicuous in Indiana, is an evidence of how susceptible newspaper proprietors are to the influence of money. It also shows to what lengths druggists will go in approving nostrums. However, while THE JOURNAL does *not* "live in a glass house," so far as advertising nostrums is concerned, and can, therefore, afford to "throw a few stones," yet we must admit that there are some medical journals (and we regret to admit that Indiana is the home of one or two of them) that are not one whit better than the newspapers in the matter of carrying nostrum advertising. These medical journals can just as well carry the advertising of "Tanlac" as to carry the advertising of a lot of other proprietary remedies that have been proved to be sold under fraudulent claims, and are not only advertised in certain medical journals, but in the lay press as well. We shall be interested in knowing whether the lay press beats the medical press in cleaning up its advertising pages. In reality the lay press deserves more credit, for lay papers are not in as favorable a position as the medical press to see the inconsistencies of the nostrum evil and the harm that it is doing.

ECHINACEA

A prominent firm of pharmaceutical manufacturers again is flooding the medical profession with literature concerning echinacea. In this advertising it is stated that "it is safe to say that its uses are unknown to the majority of physicians, and that of those who do know of the drug, many fail to appreciate its truly wonderful properties." Be it remembered that *The Journal of the American Medical Association* repeatedly has published information to the effect that echinacea is practically worthless as a therapeutic agent, and the information is based on thorough investigation, including clinical experience. However, the exploiters of echinacea continue to bob up with literature bubbling over with all sorts of extrav-

agent claims concerning the value of echinacea in the treatment of various disease conditions, but especially in the treatment of "septicemia or dyscrasia" (rather ambiguous, but that cuts no figure with the manufacturers who make the statement). No doubt a lot of physicians who let pharmaceutical houses do the thinking for them will take as gospel truth these circulars concerning echinacea, and extend patronage accordingly. They may even believe some of the glowing testimonials in which echinacea is said to have been beneficial or even curative in diphtheria, syphilis, puerperal fever, pyorrhea and a host of other conditions. However, physicians will show a little better judgment if they get their recommendations from other than manufacturers' pamphlets.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

HAVE you paid your dues? Delinquency occurred February 1, and with delinquency your medical protection ceased.

In furthering the "patent medicine" interests some of the leading druggists are utilizing the daily papers for the publication of letters on "How to Preserve Health," and signing their names to the same. Ye gods! How many more are going to get into the medical profession through the back door!

DURING January the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

E. R. Squibb & Sons: Antistreptococcus Serum, Rheumaticus.

Lyster Brothers: Lyster's Prepared Casein Diabetic Flour.

"SMALLPOX in court" is the heading to a newspaper item in a Princeton (Ind.) paper. The item says: "Bert Hope was being tried in the court for attempting to murder his mother. The prisoner took sick and the physician pronounced it smallpox. He was badly broken out in the court. The judge hastily continued the trial and the 600 or more people who packed the court room made a very hasty exit."

DR. CHARLES R. BIRD of Greensburg sends us the following poetic effusion, presumably received from a grateful patient:

Here's my check fer my bill tu date
 Fer doctorin meself en my runnin mate.
 Fer curing us both uv our pains en ills,
 Fer throat wash en quinine, tablets en pills.
 "Gosh!"

Dr. Bird is to be congratulated upon having a patient who is so willing to pay. Some of us are not so fortunate.

WE want every member of the Indiana State Medical Association to inspect the advertising department of THE JOURNAL each month. Something is advertised each month that should be of interest to every member. When patronizing the advertisers write and tell them that you saw their announcements in THE JOURNAL.

It helps them, it helps us, and it helps yourself. We work hard to keep the advertising pages clean and a credit to the medical profession of the state. Show your appreciation of our efforts to safeguard your interests.

As an indication of the influence of the medical department of the German army it is announced that the military authorities have ordered that the advertising signs of quack doctors and advertisements of secret remedies be removed from the public comfort stations and the fronts of houses in Berlin and the immediate vicinity. The military commanders are also responsible for other repressive measures against quackery. No matter how much we may criticize the military spirit of Germany we can but admire the German people for the efficiency with which everything is done, even to the suppression of quackery. Things may be done by rule and in a stereotyped fashion, but they are invariably done in an efficient way, and quite in keeping with the best interests of the people.

A COURT ordered tonsils removed. This happened in Brooklyn and is the first decision of its kind. The board of education had passed a rule that parents must send their children to school in as good physical condition as possible. The court not only sustained the rule but also ordered the parents of a pupil to have their son's diseased tonsils removed. They had ignored frequent complaint from the board of education that the boy was incapable of making progress in his education unless his tonsils were treated. Of course, this decision will apply to dental defects as well and boards of education in New York will have authority to compel parents to remove such defects as may retard the children's progress in school work and which are a menace to their children. This decision is most important and will have a far reaching effect.

SINCE the publication of the January number of THE JOURNAL, in which we called attention to the efforts of the retail druggists to hamper the medical men in the prescribing of narcotics, we have learned that inspectors have visited several towns in Southern Indiana and warned physicians that under the state law they are forbidden to supply a patient with more than one dose of any narcotic. In this connection it may not be amiss to remind the doctors that the law does *not* limit the quantity of drugs which may be supplied by physicians to their own patients, and we are reliably informed that there are court decisions which settle this whole matter. However, what the doctor should be interested in is an interpretation of the law which is not only in the interest of suffering humanity and the physician who is called on to relieve suffering humanity, but in the interest of justice and fair play. The retail druggists should be in better business than fathoming a movement to help themselves by tearing down others.

"HEART diseases kill more people in the United States than tuberculosis or pneumonia." This statement is made by the Bureau of Census, Washington, D. C. The death rate from heart diseases has increased from 123.1 per 100,000 in 1900 to 150.8 in 1914. This increase raises heart diseases from its rank as third or fourth as the cause of death to the first place. It is within the power and it is the duty of physicians to stop this increase in heart diseases through good advice concerning living habits. The increase in heart diseases is certainly

largely due to immoderation in eating, drinking, working and playing. Heart diseases will continue to increase so long as personal hygiene is neglected. Inconsiderate treatment of the human body is rank foolishness and if heart diseases continue to increase, that increase will be coincident with an increase of foolishness.

POLLUTION of streams by cities will probably now cease in New York. Damages has been awarded against Batavia, N. Y., because of the pollution of a stream, and this will undoubtedly wake up the city fathers to the importance of not turning a stream into an open sewer and damaging people living on the stream. Property owners along the stream into which Batavia deposited its sewage showed that the stream was severely polluted. The New York supreme Court affirmed the judgment of the lower court and awarded damages. The New York supreme court says: "The inhabitants of a city or village collectively have no more right to pollute the waters of a stream than a single individual and where a city empties its sewer system into a living stream as the defendant has done in this case and damage results to the riparian owners it must respond in damages."

DROPPING liquor advertisements has become epidemic among the newspapers. The Hearst papers now refuse to take liquor advertisements. In its campaign against alcohol as a public health menace, the New York City Department of Health has urged the newspapers to refuse all advertisements of liquors. The said health department called the attention of the newspapers to the fact that while the editorial pages have carried on forceful and no doubt profitable propaganda against alcohol, the advertising columns have blazed with advertisements of whisky and "patent medicines" which contained large amounts of alcohol. Mr. Hearst, owner of the Hearst papers, issued a formal order Sunday, January 9, that no more liquor advertisements would be received for his papers. If this order is to include the cheap cocktails masquerading under the name of medicine the "patent medicine" interests have received a stunning blow.

MORE and more are the physicians of Indiana beginning to learn that they are to be made the victims of the rapacious insurance companies in the matter of fees for services rendered in cases that come under the Workmen's Com-

pensation Act unless a united stand is taken for what is reasonable and right. From many parts of the state come complaints from physicians who are having their troubles with the insurance companies in securing just compensation, and the question arises as to just what the medical profession is going to do about the matter. If it was a question of securing anything more than established fees *THE JOURNAL* would offer no protest to the effort on the part of insurance companies to protect themselves from being imposed upon. However, in not a single instance that has come to our attention have the fees to which the insurance companies have offered objection been anything more than would have been charged a private patient for similar services in the locality in which the services were rendered. The question is bound to be a serious one unless medical men refuse to be browbeaten and coerced in accepting anything which the greedy and conscienceless insurance companies see fit to offer for medical and surgical services.

THERE should be no occasion for the time honored custom of accepting January 1 as the time for turning over a new leaf in anything, and yet if that is the only date for turning over a new leaf, then the time honored custom should prevail. But the point is, we ought to take an inventory of our habits and methods of life oftener than once a year, and to correct our faults and inefficiencies whenever they are discovered, whether it be in January or July. Many a doctor could profit by a change in his methods. He could so systematize his work that he would have more time for reading, to say nothing of more time to accomplish the things that are worth doing. Most doctors spend too much valuable time on details that could be entrusted to some one else, and there is not one doctor in fifty who could not, to advantage, improve on his business methods. Then there is the purely ethical side of the practice of medicine which too often is neglected, with attending injury to the medical profession as a whole and the individual doctor in particular. Every doctor owes something to his confrères as well as himself, and he who is selfish and exhibits no respect or regard for the privileges and rights of others will, in the end, suffer the penalty that is justly due. It is a good thing for us to canvass the situation frequently and take note of the assets and liabilities in our conduct. This can be done oftener than once a year.

THE throat surgeon is certainly having things thrown his way now that the internist is finding so many disturbances of the general health due to focal infection in the tonsils, and within recent months medical journals have published numerous articles in which surgeons are calling attention to cases of appendicitis that follow tonsillitis and are supposedly indirectly due to the focal infection in the tonsil. No doubt tonsillectomy, well performed, is proving of unquestioned value in a large percentage of cases, and yet there is danger that a lot of inoffensive tonsils will be sacrificed, to say nothing of the prevalence of a great deal of bad surgery due to attempts on the part of the inexperienced and illy trained to perform the operation. The physician who serves his patient best is the one who will weigh carefully the various symptoms that are presented and arrive by exclusion at a diagnosis of tonsillar infection as the probable seat of trouble before recommending the removal of a pair of tonsils which apparently are giving no trouble. With a decision to remove the tonsils, it stands to reason that the operation should be done by one who is competent to do the work in a highly skilful manner. The tonsillotomies, together with the mutilating surgery that is frequently seen in attempts to do tonsillectomies, are doing the cause an infinite amount of harm.

THE relationship between apical dental abscesses and systemic lesions at present is receiving a great deal of attention. At the University of Minnesota Hospital it was found, in a series of cases, that over 68 per cent. of all artificially devitalized teeth were found with apical abscesses, and the total number of abscesses, including those found in pulpless teeth due to caries or death from accident or too proximal fillings, was 83 per cent. In the examination of 500 cases, 1,350 dead teeth were found, and of these, 976 had root canal fillings. Of these, 159 cases with apical abscess had bacteriologic review, and of 107 cases from the university clinic, 100 showed the presence of streptococcus viridans. These findings show that the apical abscess is merely another evidence of a focus of streptococcal focal infection, just as the heart, the mucosa of the stomach, the articulations or the kidneys are evidence of secondary deposits. In other words, it is of hematogenous origin. The pathogenicity of these abscesses and their relation to other concurrent foci have had ample clinical

verification. The blind dental abscess has a very practical significance, inasmuch as it may be the only focus left and may hold the balance of power in the struggle of the body for complete sterilization. In every case of streptococcal infection its presence or absence must be determined.

AFTER seeing that strontium salicylate has as yet an unproved reputation for therapeutic efficiency and quoting from standard authorities as regards its effects, M. A. Blankenhorn, Cleveland (*Journal A. M. A.*, Jan. 29, 1916), reports the results of an investigation of the drug. Beyond the statements quoted and one or two others, very little can be found favorable to strontium even as a carrier for salicylic acid. Obviously, the only claim clinically and experimentally for strontium is that it modifies favorably the action of the anion—especially its action on digestion. This claim that strontium diminishes digestive disturbance could be well tested on the salicylate, and it was with the hope of ascertaining its merits that it was used in the medical wards of the Lakeside Hospital for this report. The disorders in which it was given were rheumatic fever, tonsillitis and endocarditis, and it was given under the same conditions as when the test of the toxicity of salicylates were made by Hanzlik. In all cases the patients were above 12 years of age, and the drug was given in 20-grain doses combined with an equal amount of sodium bicarbonate, the whole dose in powdered form placed on the tongue and washed down with from 2 to 4 ounces of water. Water was given freely between doses and a liquid or soft diet when possible. The extremes of the toxic dose were 80 and 500 grains. The mean dose was 180 and the mean dose giving marked relief of pain was 260, corresponding in this respect closely to other salicylates. The salicyl content of strontium salicylate is about four-fifths that of sodium salicylate, based on the amount of available anion, the average effectual dose in rheumatic fever being slightly higher than that of sodium salicylate. The conclusions deduced are as follows: 1. The mean toxic dose of strontium salicylate is the same as that for sodium salicylate. 2. Strontium salicylate produces the same gastric and other toxic symptoms produced by any salicylate. 3. It is no more effectual in relief of pain. 4. It is not so convenient to give as are the more soluble salicylates.

A PHYSICIAN in the southern part of the state has sent us one of his blank statements and asked us for an opinion concerning the same. The statement is the usual form, with the exception that it contains the following two paragraphs: "Bills will be sent regularly September 1 and January 1 of each year, when settlement is expected;" and "The doctor cannot live on work, fresh air and hope any longer than you can, so pay him promptly as you would like to be paid when you have worked for some one." Our first criticism would be concerning the announcement that statements are sent out on September 1 and January 1 of each year when settlement is expected. In the name of common sense, why should not the doctor be paid on the first of every month the same as the merchant who expects the doctor to pay on the first of the month? There is no valid reason why the doctor should not send statements to every one on the first of every month. It not only is more businesslike and shows a systematic way of conducting the office, but it lets patients know the amount of their indebtedness and is a reminder that the doctor should have his pay the same as any one else. Concerning the other announcement we have little to offer except to say that we believe it would be in better taste to present plain, businesslike statements on the first of every month, and if there are to be embellishments by any reminder concerning the doctor's status as a business man it may be well to say that all bills are due at the completion of professional services. The trouble with nine-tenths of the doctors is that they do not systematize their work or adopt businesslike methods in the rendering and collection of accounts. They really educate their patrons to be slow pay, or even no pay, and there is no excuse for it. If the services are worth the price charged, then there is no reason why the patient should not pay for the same. It is taken for granted that every doctor will extend leniency to patrons in the payment of bills if leniency is needed, but a very large proportion of the business of every physician is among a class of people who are just as able to pay the doctor promptly as they are to pay the grocery keeper promptly. The doctor does not have to be a Shylock and exact the pound of flesh, but he can with profit to himself, and with increasing respect of his patrons, adopt business methods in the collection of his accounts.

WE note that many prominent medical societies are discussing the economic and ethical problems of the doctor. The Philadelphia County Medical Society recently has had a symposium on this subject with a number of interesting papers presented. Among these was a paper by Dr. Thomas F. Reilly on "The Problem of Increasing the Physician's Income: What Shall We Do to Be Saved?" This paper discusses some very pertinent questions, and we reproduce the abstract of the same as published in *The Journal of the American Medical Association*:

The principal reason the profession has not solved this problem is an erroneous concept of altruism which has failed to acknowledge that money is a desideratum to the doctor. The high cost of living, which makes the dollar of today have a smaller purchasing value than fifty cents had twenty years ago, renders the situation acute. Every one, except the doctor, has raised his charge for services. The doctor has improved his service to the community by his use of telephone and automobile, by more thorough examinations, and in other ways; yet he has not capitalized any of these improvements in service. The fees for ordinary services can be raised only by (1) a concerted effort of the physicians of a community, or (2) by the independent raising of fees by the individual physician. In a small community, charges can best be raised by concerted effort on the part of more than half of the practitioners in the locality. In large cities the county society is the only medium through which just fees for professional service can be determined and announced. Other organizations are more or less of mushroom growth; when they are started, they look promising, but almost invariably they fade away after a year or two. In large cities, permanent medical organization is not an easy thing to bring about. Attempts to bring all of the members of the profession into one body, even though the aim be for the common good, are but empty dreams. Most of the profession would rather be sacrificed than find their names bracketed with crooked sticks and doubtful moralists. It should be feasible in a large city for the county society to insert paid advertisements and reading notices explaining to the public the high cost of medical life, and then follow this with a statement of approved charges for physician's services founded on a living wage. Iteration and reiteration of this matter will make practicable the collection of higher fees by the individual practitioner. When fees are to be raised by the individual physician, independent of the society, it may be advisable to make the change by first doubling the fee for the first examination; at a

later period, all counsel can be charged for at the new fee. To do this the physician must give better service—a more thorough examination at the first visit and special treatments at each succeeding visit. It is sheer folly for general practitioners to criticize proper fees charged by specialists and surgeons, simply because these charges are larger than the amount collected by the general practitioners for routine service.

EXPULSED FOR FEE-SPLITTING. The first trial of a member of the Missouri State Medical Association on a charge of fee-splitting and offering to split fees was held recently by one of our component societies. The offender was found guilty by the board of censors and expulsion recommended. The report of the censors was adopted by the society and the sentence carried out. The expelled member was also a Fellow of the American Medical Association, which affiliation he loses. In attacking some evils the best way to abolish them is to apply the whole force of our strength against them at the outset. This was done in the agitation against fee-splitting; the practice immediately decreased in all parts of the state where it had been prevalent, and has disappeared altogether in some places where it had threatened to gain a foothold. We need not expect, however, that simple threats to punish offenders, or that prohibitory resolutions and laws will efface this blot on our escutcheon. We must do more than that—we must drive out of our ranks those who persist in dishonoring their profession and deceiving their patients. It is now three years since the Association adopted the by-law against fee-splitting, and the case mentioned above is the first prosecution for violation of the section. This seeming indifference is due not to the inactivity of the officers of the Association, but to the fact that it has been difficult to obtain evidence supported by competent testimony. This evidence must of course come from some member who has knowledge of the offense and will produce documentary proofs to substantiate the charge—a step that is offensive and repugnant to the finer feelings of the honest practitioner. Therein lies the grip of the fee-splitter. Having Oslerized his own sense of honor by avarice and the greed for gold, he gambles with fate against exposure by men of purer motives and higher ideals. But conditions are rapidly changing. The fee-splitter is finding himself ostracized by the respectable men in the organization and these men are beginning to understand that the only way to purify our ranks is to expose and

punish offenders. The trial and expulsion of the guilty member referred to above is a warning to others that an awakened profession will purge itself of members who defy the traditions and lower the tone of our profession.—*The Journal of the Missouri State Medical Association.*

DEATHS

WILLIAM HILL, M.D., died January 21 at his home in Rochester, aged 83 years.

LEWIS LEAMING, M.D., Otterbein, died January 19, from nephritis, aged 43 years.

BENJAMIN L. FUSSELL, M.D., died January 17 at his home in Marklesville of pneumonia, aged 75 years.

GEORGE R. DUNLAP, M.D., an aged physician of Kendallville, died January 23 at the county farm near Albion.

MYRTLE M. THOMPSON, wife of Dr. W. A. Thompson of Liberty, Ind., died Dec. 30, 1915, of tubercular laryngitis.

JOHN M. BARKLEY, M.D., located for many years at Farmers' Retreat, Dearborn County, died recently at Cincinnati, aged 73 years.

EDWARD J. BALL, M.D., Mishawaka, died at West Baden, where he had gone for a rest, January 10. Death was from pneumonia. He was 42 years of age.

JACOB S. MARTIN, M.D., formerly practicing physician of Rolling Prairie, Ind., died at the home of his son at South Bend, January 30, of pneumonia, aged 83 years.

OLIVER H. JONES, M.D., Crawfordsville, died January 31, aged 72 years. He was a member of the Montgomery County Medical Society and the Indiana State Medical Association.

ORLANDO B. WILLIAMS, M.D., died January 27 at his home in Andrews, aged 67 years. He graduated in medicine from the old Medical College of Indianapolis, and practiced medicine in Andrews for more than forty-five years.

ROBERT T. NEFFNER, M.D., Weisburg, was drowned in the high water of Tanner's Creek, near New Alsace, January 19. He was about 40 years of age, a prominent physician of that community, and a member of the Indiana State Medical Association.

DAVID W. WELCH, M.D., Mount Vernon, died January 12 from pneumonia resulting from la grippe, aged 68 years. Dr. Welch was born in Galatia, Ill., taught school fifteen years, graduated from Evansville Medical College in 1886, did postgraduate work at the Chicago Clinical College, and was a member of the Posey County Society, State Association and the Ohio Valley Medical Association.

JAMES M. WOOD, M.D., Greensburg, died January 15, after an illness of five years' duration, aged 56 years. Dr. Wood was born in 1860 near Greensburg, attended the county schools, and in 1888 graduated from the Medical Department of the University of Tennessee at Nashville, and took postgraduate work at Chicago Polyclinic College and the Miami Medical College in Cincinnati. He was a member of the Decatur County Medical Society, the State Association and the American Medical Association.

WINFIELD SCOTT SHAFER, Rochester, died January 22 at the home of his son in Chicago, death being due to cancer of the liver. Dr. Shafer was born in Ohio in 1852, moved to Marshall County, Ind., in 1865, attended the county schools, the Indiana State Normal School at Valparaiso, and Rush Medical College, Chicago, and began the practice of medicine at Big Foot, Ind., in 1879, removing to Rochester in 1883. He was a member of the State and American Medical Associations.

JAMES B. DUNCAN, M.D., aged 60 years, died January 31 at his home in Bedford, from pneumonia. Dr. Duncan was born near Bedford in 1856, attended the county schools, normal schools at Valparaiso and Terre Haute and West Point Military School. He taught school for some time and entered the Medical College of Louisville. He located at Petersburg for the practice of medicine and in 1889 removed to Bedford, where he has since continued to practice. He was active in business and medical circles, and was a member of the State and American Medical Associations.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

GENERAL

DR. RALSTON, New Corydon, is critically ill.

DR. S. M. COMPTON, Isabel, Ill., has located at Forest.

DR. FRANCIS A. MALMSTONE has recently located at Griffith, Lake County.

DR. R. F. PALMER has been confined to his home with influenza for two weeks.

DR. GEORGE W. NEWELL has located at Kokomo for the practice of surgery.

DR. J. C. ROSS, Bloomington, has returned from a several weeks' stay in Florida.

DR. AND MRS. C. G. BOYER, Brazil, are spending the month of February in Cuba.

DR. JOHN W. COOK, Pendleton, has recently been elected president of the town board.

DR. F. H. HEMPHILL, Rensselaer, recently underwent an operation at a Chicago hospital.

DR. AND MRS. C. W. CAMPBELL, Hammond, are spending a six weeks' vacation in Florida.

DR. M. RAVDIN, Evansville, recently underwent an operation for appendicitis, at Chicago.

DR. C. F. NEU was called to his old home, London, Canada, to see a brother who is seriously ill.

DR. C. B. MULVEY, Montpelier, was called to Auburn, N. Y., January 20, by the death of his mother.

DR. A. O. BINGHAM, St. Anthony, has been confined to his bed for a couple of weeks with rheumatism.

THE Methodist Hospital at Indianapolis is to undergo changes and improvements to the sum of \$100,000.

BRUCE, the 12-year-old son of Dr. and Mrs. J. E. Showalter, Waterloo, died January 3 from diphtheria.

DR. C. A. ENDICOTT, Frankfort, is recovering from an attack of influenza with severe complication.

DR. GRANT GOODWIN, Monticello, now at Hot Springs, Ark., for his health, is reported to be much improved.

DR. B. M. JEWELL, Hammond, is taking a postgraduate course in eye, ear, nose and throat work in Chicago.

DR. A. P. ROOPE, Columbus, has returned from Florida and is looking fine. His family will not return before spring.

DR. B. S. POTTER has been reappointed to the position of superintendent of the Hospital for the Incurable Insane at Julietta.

DR. JOHN H. WILLIAMS, Cowan, has been appointed a member of the Delaware County board of pension examiners.

THE Plymouth Sanitarium and Hospital property at Plymouth, has been sold, and will probably be converted into a hotel.

DR. AND MRS. WALTER R. SCHLOSSER, Plymouth, announce the birth of a son, Joseph Lincoln Schlosser, Jan. 15, 1916.

MRS. LOGAN MCKINNEY, mother of Dr. S. L. McKinney, Huntingburg, was buried January 18. Death was due to pneumonia.

DR. C. R. GRAHAM, Bryant, and Miss Hazel Macklin of Geneva, were married January 5, at Bluffton. They will reside at Bryant.

DR. C. S. BADEN, Chrisney, has recently moved to Princeton, and will transfer his membership to the Gibson County Society.

DR. N. I. KITHCART, Columbia City, attended the funeral of his mother at Loudonville, Ohio, a few weeks ago. She was 85 years of age.

DR. M. A. TREMAIN, Adams, suffered a broken wrist a couple of weeks ago when the engine of his automobile backfired while starting it.

DR. L. F. WINEBURG, Ligonier, has been appointed as city health officer to fill the vacancy caused by the resignation of Dr. Frank W. Black.

DR. SEVERANCE BURRAGE, Indianapolis, was reelected president of the Indiana Society for the Prevention of Tuberculosis at their recent meeting.

SPURRED by the recent grip epidemic the City Health Board inaugurated an antisputting campaign against spitting on sidewalks and other public places.

DR. FRANK W. BLACK, Ligonier, has been appointed local surgeon for the New York Central Railway Company, and entered on his new duties at once.

DR. O. N. TORIAN has gone to New York to consult an orthopedic specialist relative to a lame back which has been the source of considerable trouble to him lately.

DR. P. E. McCOWN and wife, Dr. J. R. Thrasher and Dr. W. P. Garshwiler have gone on an Eastern trip, including hospitals of Boston and New York in their itinerary.

DR. ERVIN WRIGHT, Huntington, was tendered a farewell banquet by the physicians of that county January 5, prior to his leaving for Yoakum, Texas, to make his future home.

DR. AND MRS. ALBERT E. BULSON, JR., Fort Wayne, are spending the month of February in Florida, putting in the greater part of the time fishing at the Fishing Camp at Long Key.

DR. H. N. OLIPHANT, who recently changed his location from Forest to Frankfort, has announced his name as a candidate for coroner of Clinton County, subject to the decision at primary.

THE next annual meeting of the Western Surgical Association will be held at Indianapolis the latter part of 1916. Dr. Joseph R. Eastman, Indianapolis, is the retiring president of this association.

DR. AND MRS. P. A. KENDALL, Crothersville, are taking an extended trip through the South, including Florida, Alabama, Tennessee and other points. He expects to return about March 1.

THE State Board of Medical Examination and Registration, at its annual meeting, elected Dr. James M. Dinnen, Fort Wayne, president; Dr. W. H. Spurgeon, Muncie, vice president; Dr. W. T. Gott, Crawfordsville, secretary.

HOLLAND will celebrate a "Public Health Day" some time in March. It is planned that there will be two speakers and a stereopticon lecture on public health matters. Dr. Hurty has agreed to furnish the necessary slides.

THE quarterly report of Dr. William Shimer of the pathologic laboratories of the state show that thirty-five persons have been treated for rabies during the quarter ended December 31. Fifty per cent. of these cases were from Marion County.

DR. HARRY LAMBERSON, former physician of Connersville, but who went to Colorado Springs two years ago to wage a fight against tuberculosis with which he was stricken, has been in a very critical condition, but latest reports advise that he is gainin

THE records for 1915 show that scarlet fever and typhoid fever had less mortality than for many years, there being six deaths from scarlet fever and thirty-four from typhoid. This is out of a total of 305 cases of scarlet fever reported during the year.

THE Madison County Press Association has passed a rule prohibiting the designation of physicians as apart from other persons. Therefore, hereafter the title "Dr." will not appear before the names of physicians in the newspapers of that county.

THE inauguration of the Frederick Forchheimer Chair of Medicine of the Medical College of the University of Cincinnati, and the installation of Dr. Roger Sylvester Morris as Frederick Forchheimer Professor of Medicine occurred January 26 and was a notable event.

DR. LUDSON WORSHAM was recently elected president of the Deaconess Hospital medical staff (Evansville); Dr. P. C. Rietz, vice president, and Dr. Porter Linthicum, secretary. Dr. W. P. Woods, who resigned as president of the staff after serving two years, was selected to take the place on the surgical staff left vacant by the death of Dr. D. A. Cox.

THE Indianapolis Flower Mission have records of twenty-five tuberculous children who should be housed in an institution treating such diseases. The mission is planning to build a hospital to cost not less than \$50,000 to take care of tuberculous children.

DUBOIS County Medical Society held a special meeting February 8, at Huntingburg, to arrange for the observance of "Baby-Saving Week," from March 4 to 11. Representatives from the clergy, schools, women's clubs, newspapers, etc., were asked to be present and aid in this work.

THE School Board of Frankfort being slow to appoint a much-needed school medical inspector, a room is being equipped for a free clinic, funds for which were raised by selling Red Cross seals. Twelve physicians have agreed to donate at least an hour each per month to this work.

MISS MARGARET HAMILTON, graduate nurse of the Deaconess Hospital, Indianapolis, who has been in active service in Northern France, is the first American war nurse to die while on duty. Her death occurred Oct. 31, 1915, from an infection which developed while she was nursing wounded soldiers, and her burial in the British military cemetery was attended with all due honor.

THE American Orthopedic Association announces the appointment of Dr. Mark H. Rogers, Boston, as editor of the *American Journal of Orthopedic Surgery*, the only periodical in the English language devoted to orthopedics. This publication, formerly issued quarterly, will henceforth appear monthly. The office of publication has been transferred from Philadelphia to Ernest Gregory, 126 Massachusetts Avenue, Boston.

THE city of Columbus and Bartholomew County will have, before another year, a \$100,000 hospital, situated on a beautiful stream; and to make things more beautiful and pleasant one of Columbus' big-hearted, public-spirited moneyed men is going to give 70 acres of land adjoining the hospital for a park, is going to "bridle up" Hawcreek and make it suitable for swimming, boating and fishing, build a boulevard from Tenth to Twenty-fifth streets, and otherwise beautify the grounds. This gentleman is Mr. W. G. Irwin.

THE Crescent Sanitarium of Evansville, conducted by Drs. A. M. Hayden and J. W. Phares, has been incorporated and a twenty-five-room addition will be built early in the spring, which will increase its capacity to fifty beds. The institution will be known as the Hayden Hospital. It will be under the management of Drs. A. M. Hayden and J. W. Phares. All surgical and noncontagious diseases will be received and treated.

THE State Board of Health has made a thorough investigation of the water supply of the city of Indianapolis, and a report of their water chemist, Mr. John Diggs, shows that during the period of November 22 and January 12, out of a group of sixty-two samples analyzed, forty-one showed gas-forming bacteria. The Indianapolis Water Company has spent hundreds of thousands of dollars in putting in check valves to keep the city water pure.

THE Jasper-Newton Medical Society have issued a very interesting program for the year 1916. The subjects for discussion during the year are as follows: January, Genito-Urinary; February, Obstetrics; March, Infections; April, Insanity; May, Gynecology; June, Nutrition; July, Pediatrics; August, Tuberculosis; September, Bone Surgery; October, Eye; November, Nose; December, election of officers. Dr. C. C. Bassett, Goodland, is president of this society, and Dr. A. R. Kresler, Rensselaer, secretary.

THE Medical Section of the American Life Convention will hold their sixth midyear meeting at Birmingham, Ala., March 1, 2 and 3 at Hotel Tutwiler. Among the Indiana speakers at this convention are Dr. F. L. Truitt, Indianapolis; Mr. Frank P. Manley, Indianapolis; Mr. Franklin B. Mead, Fort Wayne; Dr. C. B. McCulloch, Indianapolis; Dr. F. W. Foxworthy, Indianapolis, and Dr. Albert Seaton, Indianapolis. Dr. F. W. Foxworthy, Indianapolis, is Chairman of the Program Committee.

SEVEN South Bend physicians have organized on the "community plan" and recently moved into a splendid new building especially arranged for their purpose. The building has a large reception room in the center, with a seating capacity of 100, and each doctor has a suite of private rooms leading from this reception room. The Roentgen-ray room, dark rooms, operating room, laboratory, etc., are on the second floor,

and are equipped with all modern improvements. The physicians in this union are Drs. H. M. Miller, R. C. Shanklin, C. C. Terry, E. J. Lent, C. E. Hansel, W. H. Baker and F. R. Clapp.

THE City Board of Health, Indianapolis, is now receiving its portion of the tax which was levied some time ago by a special act of the legislature. After paying all the expenses of the department for 1915 there is a balance of \$28,659. This tax is a special 10-cent levy, and thereby makes the Board of Health independent of any action of the city council. The board is making plans to pay off an indebtedness of \$60,000 which has hung over it for several years, half of which will be paid off in the near future. The estimated income this year is \$250,000 and the estimated expense for the city hospital is several thousand dollars less during the last year. Other savings have been made in the legal department.

THE county council of Marion County has appropriated \$80,000 for a tuberculosis hospital to be built near Indianapolis. The county commissioners appointed a board of managers, two of whom must be physicians, to manage the hospital. The manager receives no pay except traveling and necessary expenses. The superintendent of the hospital is selected by the board of managers, and he must have practiced medicine three years. The superintendent appoints all resident officers and employees. If anybody is able to pay for treatment at the hospital he is charged actual cost. A special levy of 1 cent in taxes has yielded about \$27,000 for this purpose. A site costing \$12,000 has been purchased near Oaklandon, a suburb of Indianapolis.

PUBLIC HEALTH

GRIP SPREAD OVER THE STATE LIKE A BLANKET says the State Board of Health. Reports to the board show that grip appeared in every county and city and town in the state. The sum total of its depressing effects and the money loss was something prodigious: People cannot be sick and not lose energy, efficiency and money.

DIPHTHERIA AT SOUTH BEND has caused no little alarm in that city. Dr. Charles Bosenbury, the very efficient city health officer, fought the epidemic valiantly and doubtless limited it very

materially. Two negative throat cultures were required before dismissal of a diphtheria quarantine. The health officers found great difficulty in controlling disease among foreign population. Insanitary conditions in the poverty stricken homes caused the health department considerable difficulty. The number of cases and deaths was not completed at this writing.

SURGEON TRASK OF THE U. S. PUBLIC HEALTH SERVICE says: "The practicing physician who fails to report a case of communicable disease, thereby endangers the welfare of the community and exposes others to the dangers of contracting disease, and among those exposed may be others of his patients. Such a man is neither a good physician nor a good citizen and is opposed to the principle of control of disease for the protection of the community. There are all too many such physicians and the sooner the science of medicine gets rid of them the better."

THE INDUSTRIAL BOARD OF INDIANA has established a precedent in holding that employers are liable for medical attention on account of injury to employees, but only in such instances where employers would be liable for compensation to the injured employees. The board refused to order the Horace Wood Company to pay a fee charged by Dr. Colin Dunbar who treated an employee of the Wood Company. The evidence showed the employee was injured while scuffling and was not in the service of the Wood Company at the time.

SMALLPOX VACCINE IS NOW PREPARED IN THE LABORATORY OF THE NORTH CAROLINA STATE BOARD OF HEALTH AND DISTRIBUTED FREE THROUGHOUT THE CITY. This vaccine is made according to Noguchi's new method and is absolutely free from all contaminating bacteria. North Carolina also has all time health officers. It pays them living wages, supports them with abundant law and makes the position one of honor and dignity. All things important in public health work in North Carolina has been advanced and secured by the State Medical Society.

HIS BIRTH NOT RECORDED and great business trouble attends. Mr. Michael A. McLaughlin, Detroit, Mich., was born in Butler, Ind., in the year 1893, on July 6. He asks the State Board of Health to send him a transcript of the certificate of his birth and it cannot be found in

this office. Mr. McLaughlin wants this transcript to verify his age in a matter of business transaction. He is deeply disappointed that the physician in attendance when he was born did not perform his full duties and make legal record of his birth. He also must endure a loss on account of this failure of the physician.

ONLY PASTEURIZED MILK will be sold in Gary after March 1, 1916. The city council of that city has passed an ordinance making it unlawful for other than pasteurized milk to be sold in the city. This is a wise restriction. The ordinance also requires that the milk furnished to the city shall be from clean dairies and healthy cattle, and collected and transported in a clean way. On top of all this pasteurization is required. As said, this is wise and it certainly is economical. Pasteurization makes certain that the milk does not carry any disease and does not in the slightest degree interfere with the nutritive power of the milk.

POLICEMAN SPIT ON THE SIDEWALK IN INDIANAPOLIS. At least one policeman was seen to discharge his oral pollution on a cement walk. Mr. H. K. Milhouse, U. S. Civil Service Officer in Indianapolis, says: "I was coming down Massachusetts avenue and saw a red-faced, bulky policeman come out of a saloon. As he turned toward me a mouth full of tobacco spit splattered on the sidewalk and the policeman grinned. I reproved the policeman. He seemed to think my reproof very funny as he replied: 'Yes, I guess the board of health would be mad if they knew it, but, you see, it is all owing to who does the spitting.'" Dr. Hurty also reports having seen a policeman with big, round belly spit a copious quantity on the sidewalk in front of the University Club. An officer of the U. S. Public Health Service has said that Indianapolis is the worse spit-up town in the United States.

THE FIFTH ANNUAL MEETING of the Indiana Society for the Prevention of Tuberculosis occurred at Indianapolis, January 25 and 26. Prof. Severance Burrage, president, delivered a ringing address. He reviewed all the accomplishments of the society during the last year, and contended that one of the most necessary things for future work against tuberculosis was to secure reports of the disease from physicians. He said the education of physi-

cians to diagnose tuberculosis in its early stages and to promptly report them was absolutely necessary if further advancement against the plague is to be secured. He also advocated the establishing of county hospitals and also institutions where cases of advanced tuberculosis could be taken. He also insisted that houses in which tubercular patients have lived and died must be properly renovated and disinfected. Dr. Alfred Henry held a tuberculosis clinic in the medical college Wednesday, January 26, in the forenoon.

COUGHING IS LARGELY A HABIT and may be controlled. The spitting habit is bad and very unnecessary and it would indeed be a good thing if people would make an effort not to cough. The dry, hacking cough is certainly unnecessary and if not controlled will become a habit. Constant coughing is detrimental to the lungs and larynx and the throat generally. It would be well for the public to adopt the slogan—DON'T SPIT. DON'T COUGH IF YOU CAN HELP IT. If one must cough and the inclination cannot be controlled, a folded handkerchief of paper or cloth should be held firmly over the mouth. The handkerchief smothers the noise and prevents the flying into the air of all mouth and nose secretions which carry infection.

THE "PATENT MEDICINE" EVIL in Germany is receiving some hard knocks. A correspondent from that country says: "For some time past the newspapers have carried on an effective advertising campaign for all kinds of remedies. The work has been carried on not only through frank advertisements but also through reading notices on the editorial pages. This came to the notice of the police and ordinances were passed forbidding advertising of articles, processes, remedies, etc., designed to relieve or prevent or cure human ailments. The police suppress the advertisements and 'patent medicines' if the claims of their process or article are extravagant or misleading; also if the processes or articles are such as may endanger health." This matter is of interest because it shows that the "patent medicine" and nostrum evil has actually taken hold of Germany. It is to be hoped that the time will come when "patent medicines" will all disappear. This would have happened long ago if the Pharmacopeia Council of the American Medical Association had had its way.

"FATAL DISEASES ARE NOW ON THE DECREASE," is the statement made in a recent bulletin issued by the Federal Census Bureau at Washington. The diseases mentioned as showing reduced death rates since 1900 are tuberculosis, pneumonia, diarrheal diseases, diphtheria and typhoid fever. Tuberculosis in the decade from 1904 to 1914 fell from 200.7 to 146.8 per 100,000. Diphtheria fell from 43.3 per 100,000 in 1900 to 17.9 in 1914. This was a decline of 59 per cent. Diarrheal diseases among infants show a decline of from 133.2 in 1900 per 100,000 to 79.4 in 1914. Typhoid shows a decrease from 35.9 in 1900 to 15.4 in 1914.

DR. SIMON J. YOUNG RESIGNS and it is a matter of deep regret with the State Board of Health. Dr. Young has been the extra efficient county health commissioner of Porter County and his retirement from public health work is an actual blow to hygiene in Indiana. Dr. Young was appointed health officer of Valparaiso and Porter County and set on foot a movement which eventually resulted in employing a deputy who gave his entire time to the work. The work of this deputy, who was an all-time health officer, has from time to time been mentioned in the bulletin. Dr. Young regarded his public health service in the light of a public health duty, not being at all attracted by the salary which was a not uncomfortable sum. Dr. Young resigned because he met with opposition from the county council which refused to make an appropriation for a continuance of the all-time deputy.

CORRESPONDENCE

PHYSICIANS' FEES UNDER THE WORKMEN'S COMPENSATION LAW

INDIANAPOLIS, Feb. 1, 1916.

To the Editor:—Any one giving the matter unprejudiced thought will soon be made aware that certain questions affecting physicians have arisen under the workmen's compensation law that are very difficult of solution. As might be expected the question of fees has occupied most prominently the attention of physicians. This

is entirely proper, for unless the question can be amicably settled it will seriously interfere with the proper working of the act.

The act itself does not attempt to specify a fee schedule, leaving that question entirely with the industrial board who is to be guided by the fees customary in the community where accidents may occur. This arrangement is eminently fair and recognizes the principle accepted and acted on by the medical profession that the fee be made in proportion to the patient's ability to pay. This principle should, it seems, be the guiding one for physicians in estimating an equitable fee schedule.

But at this point the liability companies are required by the law to assume for the employer the obligations under the act. Not being an organization of physicians they are compelled to employ physicians to assist them in the proper discharge of their obligations. These companies very properly having an eye to dividends have seen fit to submit schedules which attempt to specify what shall be the remuneration for a given surgical service. It is this schedule of fees offered by the liability companies that is being made the target of a good deal of ineffectual and poor shooting.

In the first place, let no one deceive himself that such a fee schedule is incapable of abuse except by the liability companies. For illustration: A short time ago a highly reputable surgeon from Wisconsin related how surgeons, many of them incompetent for such work, were now plating fractures under compensation law and charging the companies big fees, whereas formerly such fractures were treated with splints and casts, and fracture fees charged, the indication for treatment here being the increased fee and not the surgical indication for proper treatment.

With such facts before them, can a liability company be expected to approach the making of a fee schedule with confidence and frankness? As a matter of fact, we think the companies are up in the air about the fees. They have no very definite idea as to what a proper fee is. The only fee schedule we have seen is an ancient piece of literature and could not be a guide to 25 per cent. of the services likely to be rendered under the act. Dislocations of bones of hand and ankle, ligature of artery (not in open wound) are examples of the

inadequacy of this schedule submitted by one of the larger companies. One working under this schedule could get out of his accident cases, taking big and little as they come, more than he could collect from patients if they were not insured. And yet some of the specified fees are ridiculously small.

As we interpret the fee schedule as viewed by the liability companies it is made primarily with a view of protection. It has not been made with a close analysis of what the physician may consider an adequate fee in a given case. Aware of the uncertainties of surgeons' fees they have primarily attempted to safeguard their own interests and in so doing have quite naturally failed to properly consider the physician. This fault is not going to be corrected by wholesale denunciation and undue criticism.

It is said that the fees are too small and without doubt in some instances they are and should be revised, but no one has said what they should be. We have no data on which to base a schedule. It would require a considerable amount of research work to get accurate facts relative to the average specific fees for specific services rendered the industrial class, as the law provides this shall be the basis of charge. If the medical profession will produce this data and then submit it to the liability companies and they refuse to accept it, then will the time have arrived to demand it. Let no one be surprised, however, to find as a result of such research that a considerable amount of minor surgical service rendered the industrial class under the system of the patient paying for his own services is done at a smaller figure than most of the liability companies' schedules call for.

The truth of the matter is that the medical profession has been caught in a dilemma. Industrial medical service in this country has been done for notoriously small fees and it has been correspondingly inadequate service. The workmen's compensation law will undoubtedly improve that service. The problem is, how to adjust the fee to improve service, and this can be done only by careful investigation and frank discussion with insurance companies, with a willingness on the part of both to make concessions.

MURRAY N. HADLEY, M.D.

SOCIETY PROCEEDINGS

INDIANAPOLIS MEDICAL SOCIETY

Hotel Washington, Dec. 7, 1915

Meeting was called to order by the president. The secretary read a circular announcing a reward for the apprehension of a "Dr. Miller," a graduate in chiropractics, who is forging checks throughout the country.

Dr. Kitchen made a plea for careful thought on the part of members before signing the fee bill handed physicians by various insurance companies. The chair appointed Drs. W. B. Kitchen, A. L. Marshall and Murray N. Hadley to formulate a report for the society's consideration.

Dr. Charleton introduced the following resolution: Pursuant to a movement inaugurated by the Southern Medical Association and now forwarded by the American Medical Association, the membership of the Marion County Medical Society proposes and directs its secretary to notify our United States senators and congressmen accordingly, the following resolutions:

1. That in the proposed legislation before congress for action during the coming winter applying to our military preparedness—that better provisions be made for the medical service which is, and always has been, inadequate.

2. There should be an increased personnel with complete and generous equipment for this most important branch of the service.

3. The 1901 legislation was sadly deficient and later the general profession of the country was called in to supplement in a disorganized and most inefficient way the weakness thereby made possible. This should all be amply corrected in the coming legislation.

4. That in some way preliminary service in peace times be made attractive to physicians in civil life so that a trained reserve be ready for war emergencies. Inasmuch as the success of an army must depend on the health of the army, we urge that this hitherto neglected department be adequately enlarged and equipped. Adopted.

Dr. C. D. Humes reported a case of cerebrospinal lues: Mrs. E., aged 51, a widow, suffered eight years with a severe pain under the right shoulder blade, which radiated to the left hip and groin. While this intense boring pain in the back was the particularly annoying symptom, she also had pronounced pain in both lower extremities, particularly at night and practically never free from some vague sort of discomfort there. In 1911 she was operated on for supposedly tubercular kidney; the left kidney was exposed but not removed. All of this time she was controlling her pain with large doses of morphia and variable quantities of alcohol. After several weeks' observation, late in 1913, she was operated on for gallstones; none were found, but at the same time, the appendix was removed and better intestinal drainage established. While her general health was somewhat improved by this operation, she did

not get relief from this intense pain in the back. She was practically helpless so far as household duties were concerned. The blood examination made in 1913 showed a negative Wassermann. She had, within the six months prior to my first examination, had attacks of nausea, dizziness, deafness, dull vision, mild aphasia, followed by headache, lasting usually twenty-four hours. For several weeks prior to my first examination she was given large doses of iodids, with good results. This confirmed, to a degree, our suspicions of central nervous system involvement. At the time of examination she showed a moderate blood pressure, lungs and abdomen negative, weight 118 pounds; evidence of a mild right hemiplegia; leg slightly plastic; eyes responded to light; pupils even; deep reflexes all exaggerated, the right greater than the left. There was no change of fundi except slight distention of veins; some retinal exudate above the nerve head and what we considered evidence of some former intracranial pressure. Two blood examinations gave a negative Wassermann; spinal fluid was 100 per cent. positive one-tenth c.c. and globulin excessive. The patient at this time was given 0.15 of neosalvarsan. She reported relief from pain in two days and was able to visit friends at a distance. I continued the treatments at short intervals, never giving more than 0.45 and in all she received 2.10 gm. of neosalvarsan. In January, 1915, six months practically after the first injections of neosalvarsan, I began deep injections of mercury. She has received up to this time, not more than 15 gm. of mercury salicylate. The blood and spinal fluid examination made in October, 1915, showed blood Wassermann negative; spinal fluid Wassermann negative; cell count normal, without globulin excess. Her weight now is 130 pounds, a gain of some 12 pounds, and her physical and mental strength have more than proportionately improved. The interesting feature in this case is that she has obtained practical freedom from all pain in the back and relief of the sensory disturbance in the lower extremities. She is able now to do her housework, gets about the city, visits her friends in near-by towns and expresses herself as feeling first rate.

Dr. V. H. Moon reported a case of duodenal carcinoma with an unusual complication. The patient, male, aged 50, developed a persistent diarrhea three weeks before coming to the hospital. He had been well previously. During the three weeks he lost 25 pounds in weight. His complaint was diarrhea, pain in the abdomen, weakness and hunger. He continued to lose weight and strength and died without a definite diagnosis having been made. Tuberculosis and a possible malignant condition were considered. He was treated for amebic dysentery. Bright red blood was twice observed in the stools. Necropsy showed a neoplasm, hen's egg in size, in the duodenal wall 3 inches below the pylorus. This had ulcerated through the wall and had involved an adjacent area of the transverse colon which also ulcerated through, making a pathologic duodenocolostomy. The omentum was wrapped about the point of adhesion and perforation of the two portions of bowel, and had so perfectly covered the region by its adhesions that none of the bowel contents had

escaped. The passage from the duodenum into the colon was of size to admit the index finger easily. There was moderate enlargement of two lymph glands adjoining; no other metastases were to be found. The patient probably died of cachexia resulting from lack of nourishment, the food going from the upper portion of the duodenum directly into the transverse colon, thus short circuiting the small intestine. This also accounted for his diarrhea and for the occurrence of bright red blood in the stools.

Dr. Goethe Link reported four cases: 1. Acute hematogenous nephritis. Mrs. B., aged 28, had been treated five weeks for typhoid fever. Her leading symptoms during that time were erratic fever and pain in the abdomen. I found her emaciated, very toxic and with marked mental hebetude; temperature 104; pulse, 130. No complaint was made pointing to the kidney in any manner. There was general abdominal pain and tenderness. The right kidney, enlarged and tender, was easily palpated. When turned on her abdomen slight edema could be seen in the right costovertebral triangle by comparing the two sides. There was frequency of urination during the day, three to four times at night. Pelvic examination was negative. A catheterized bladder specimen of urine showed albumin, a slight amount of pus and some red blood cells. Cystoscopic examination revealed a normal bladder, left ureteric orifice normal, right ureteric orifice slightly swollen, slightly red, and surrounded with small bullae. Urine from the left kidney was very dark, such as is seen in febrile conditions but contained no pus. Urine from the right kidney was less in quantity, very light in color and contained pus equal to the total amount in bladder specimen. She was taken to the hospital and nephrectomy done; duration of operation twenty-five minutes. The temperature dropped to normal immediately after the operation and remained so. The patient recovered. The kidney showed multiple abscesses with colon bacillus as the predominating infection. Careful examination of the patient showed no probable point of entry of infection, nor was there any history of recent supuration. Her teeth numbered many cavities and rotten snags.

2. Truss reduction of hernia en masse. Obstruction of the bowels. Mr. E., aged 56, railroad engineer, had suffered for two days from obstruction of the bowels. Ten years ago a right inguinal hernia appeared. Eight years ago a truss with large pad was obtained. The truss was always applied outside of the drawers, without previous reduction of the hernia. After wearing the truss a short while the movements of the body and truss assisted by the intervening underwear would effect reduction. Two years ago the hernia disappeared and has never returned. A finger could be introduced through the right external ring, which was larger than the left ring. There was no descent into the canal on coughing, but a slight impulse and a minute gurgle could be detected. Laparotomy revealed a cone-shaped projection of the peritoneum in the right inguinal

region at the apex of which was the peritoneal ring of his old hernia, tightly constricting a loop of ileum. The hernia sac containing the loop of bowel lay between the peritoneum and the anterior abdominal wall. The bowel was released, and though damaged, was viable. The sac was amputated and closed from within. The patient recovered.

3. Torsion of the fallopian tube (two cases). Edith C., aged 16, height 5 feet 8 inches, weight 180 pounds, was brought to the hospital suffering with symptoms similar to those of appendicitis. This was the third attack, the first one having occurred four months previously. She had been ill four days, gradually growing worse. There was pain in the right iliac region, not reflected down the thigh. She had vomited many times. Vaginal examination was unsatisfactory as she was a virgin. The gynecologic history was normal in every way. Her last menstruation was ten days before present illness. Temperature, 100; pulse, 100; respiration, 22 on admission. The abdomen opened through the right rectus; incision was found to contain much bloody fluid. The right fallopian tube was twisted just distal to the ovary, forming a large black mass. The ovaries, uterus and left tube were normal. The right tube was amputated at the point of torsion. The appendix was removed.

Eva R., aged 18, a virgin, weight estimated 275 pounds. Gynecologic history normal. Symptoms and operative findings identical with previous case. Recovery.

4. Appendix in hernial sac. Pin perforating appendix. I was called to operate on Mr. R. for strangulated hernia. There was a hard sausage-shaped mass in the right groin extending into the scrotum. After incision this mass proved to be an infiltrated spermatic cord. Further search higher disclosed a small hernia sac barely reaching through the external ring. The sac contained only the appendix badly inflamed and bathed in foul-smelling pus. Alongside the appendix was the sharp end of a pin which had evidently been swallowed and had perforated, the head end still within the appendix. The appendix was removed without difficulty and a Bassini hernioplasty was done. It was not possible to make the external ring its normal size because of the large swollen cord. The wound healed without suppuration and the patient is now well.

DISCUSSION

Dr. Erdman emphasized Wassermann of the spinal fluid.

Dr. Hadley reviewed the case of Dr. Humes.

Dr. Noble: The pathology in Dr. Moon's case is rare. Death in these cases is not due to the malignancy but to some other condition. In eight cases I have not found the malignancy in the immediate surrounding lymph nodes. Two things stand out in these cases. Metastasis, which is uncommon, and obstruction.

Attendance, eighty-four.

Meeting adjourned.

Hotel Washington, Dec. 14, 1915

Meeting was called to order by First Vice President Ada E. Schweitzer.

Dr. S. E. Earp especially called attention to functional heart sounds, placing emphasis on those having a physiologic bearing.

During childhood there are very frequently abnormal heart sounds that respond favorably to treatment in which rest, freedom from excitement and the regulation of the digestive functions are among the important factors. Even in the raw recruit who is a candidate for military service, when under excitement during the act of enlisting or from nervous strain, which seems to threaten untoward consequences, if such a person lies down for a short time and the condition is relieved or only partially so, it is generally an indication that it is physiologic; at any rate, it is usually amenable to treatment and frequently drugs are not needed. Mention was made of a recent belief founded on Roentgen-ray examination of athletes immediately after fatigue, that the heart really contracts instead of dilating. Peabody has taken the position that the auricles do not contract or only feebly so. They are composed of serous and fibrous tissue, while the ventricles have little muscular fiber. They empty by suction and not by contraction. The details of animal experimentation were cited in proof of this belief, and much stress was placed on obtaining and retaining good nutrition of the heart muscle to favor hypertrophy in endocarditis and thereby resulting in good compensation. In nearly all cases of endocarditis there has been no element of myocarditis which should have been remedied before the appearance of a murmur. There is a greater degree of safety with a loud murmur than a soft one. The prognosis in mitral stenosis is not so unfavorable as we were formerly taught. Where careful consideration is given such a condition the outlook is not especially discouraging and patients experience fairly good health for many years. In an examination we should know the size of the heart, its position, the character of the pulse, blood pressure and all things possible concerning the heart and blood vessels, and by all means seek all the aid that the laboratory can furnish.

Dr. George S. Bond read a paper on "Diagnosis and Prognosis of the Cardiovascular Diseases": Advances in the diagnosis of cardiovascular diseases have been retarded from reaching general acceptance by the retention of certain fixed ideas. Teachers and textbooks have emphasized so much the significance of the valvular defects and their signs that many look on this phase of diagnosis as all sufficient. That it alone tells very little of the real condition that exists in the heart, can be shown by a comparative study of cardiac cases. Our diagnosis, then, to be complete should consist of three separate divisions, all of which are of great import and throw light on the case from an entirely different angle. These are (1) primary, or structural diagnosis; (2) etiologic diagnosis; (3) mechanical diagnosis. The first has already been sufficiently emphasized

and a discussion of this would only be a repetition. Etiologic diagnosis signifies the cause behind the lesion. Most heart cases are simply a part of a general disease, and the prognosis and treatment depends entirely on the disease as a whole. These diseases cannot be definitely classified, as there are many borderline and overlapping cases. They are roughly grouped in five divisions: 1. Infection: (a) streptococcus and staphylococcus; (b) specific infectious diseases; (c) gonorrhea; (d) syphilis. 2. Degenerations: (a) arteriosclerosis. 3. Mechanical: (a) hypertension (arteriosclerosis and nephritis); (b) lung diseases; (c) primary cardiac overstrain. 4. Toxic and metabolic: (a) goiter; (b) obesity; (c) poisons (alcohol, tobacco, etc.). 5. Nervous: (a) neuroses (palpitation, arrhythmias and pseudo-angina, etc.). This phase of diagnosis is dependent on the clinical history and the laboratory findings. Every cardiac case should be investigated from the standpoint of etiology, and this considered in relation to prognosis and treatment. In the third place it is necessary to study the mechanical changes that are found in the circulation as a result of the heart disturbance. The diseased heart may be compensated, and perform its functions just as well as one that is normal, or it may show signs of decomposition. Our prognosis also then depends on the state the myocardium and its efficiency can be estimated from the circulatory changes. Arterial pressure, both systolic and diastolic, and the venous pressure should be carefully studied. A knowledge along this line should not be dependent on one examination, but repeated tests from day to day will be much more valuable. Lastly, while the functional tests of cardiac efficient are not to be entirely accepted as reliable, the principles on which they are based are applicable in all cases. Each patient should be examined before and after exercises and all changes that may occur in the heart and circulation carefully noted. These will form a good basis for estimating the amount of work of which the heart is capable.

DISCUSSION

DR. SOWDER: The papers should be a stimulus to us for cardiac study. A heart lesion does not mean an early death as was formerly thought. There is a close relation between cardiac disease and the bacteriology of the body. We must know the status of the heart muscle itself. We must do more than diagnose. We must see relations and act accordingly when outlining treatment.

DR. KIMBERLIN: Many things are not treated as they should be. For instance, long rest should follow acute infectious diseases in children. Do not forget it is the muscular condition with which we are dealing. He cited a case of mitral stenosis which had been diagnosed as pulmonary tuberculosis. A murmur has little significance prognostically. Arrhythmic is much more indicative. Pulse force means little unless we know the size of the heart. Presystolic murmur is pathognomonic of mitral stenosis. We are never safe in two classes of heart diseases, namely, myocarditis and aortic lesions, the former due to acute infectious diseases. It is argued whether hypertension can be responsible for a dilated

heart. A broken heart is an acutely dilated heart. Cardiac diseases caused by infections are constantly recurring.

DR. MORGAN: Heart disease is second in cause of death in United States. There has been some remarkable work done by industrial organizations along the line of cardiovascular disease relative to cause and scope. People are taught to consult physicians before the breakdown comes.

DR. THOMAS: The treatment is for the secondary rather than the apparent primary trouble. He cited a case of pregnancy causing acute dilatation. Another case of heat stroke when gastric disturbance caused dilatation. One case took digitalis well, while the other did not. We should look back of every heart disease and see what really needs attention.

Dr. Brayton cited many places in literature treating of cardiovascular disease.

DR. STERNE: Pulse pressure is often misunderstood. The minimal pressure is the pulse pressure. The auscultatory method is the more reliable method. The actual systolic pressure is not the apparent systolic pressure, but if time be given the actual systole will be found lower. Systolic pressure differs in localities. For example, it is high in the loop district in Chicago. The question of occupation must be considered in relation to prognosis.

Attendance, eighty.

Meeting adjourned. ALFRED HENRY, Secretary.

Meeting of Jan. 4, 1916

Meeting was called to order by the president at 8:15 p. m. Minutes of previous meeting read and approved.

Dr. David Ross, retiring president, read a paper on "Some Facts About Appendicitis."

Society then proceeded to election of officers for ensuing year with following results: Dr. A. B. Graham, president; Dr. Bernhard Erdman, first vice president; Dr. A. L. Barnes, second vice president; Dr. Leslie H. Maxwell, secretary-treasurer. Dr. J. V. Reed and Dr. John C. Cunningham were elected members of council to succeed Dr. J. A. MacDonald and Dr. T. C. Hood, retiring members.

Dr. Fred R. Charlton, Dr. G. B. Jackson and Dr. A. L. Marshall were elected delegates to meeting of State Medical Association for a term of two years each, and Dr. T. L. Sullivan was elected for one year to fill Dr. J. V. Reed's unexpired term. Dr. C. H. McCaskey was elected an alternate delegate.

Meeting adjourned. Attendance ninety.

Hotel Washington, Jan. 11, 1916

Meeting was called to order by President Dr. A. B. Graham.

MISCELLANEOUS BUSINESS

Dr. Hadley introduced a resolution providing for an annual prize of \$50 to be given by the society to the member or group of members doing the best experimental or research work during the year. The award of this prize was to be in the hands of a

committee appointed by the president of the society. On motion of Dr. A. W. Brayton, seconded by Dr. Dodds, this matter was referred to the council for consideration.

The secretary read a letter from Mr. Judson, manager of the Newton Claypool Building, offering space on the fifth floor of that building for social, library and meeting rooms for the society, rental of the space to be satisfactory to the society. On motion of Dr. Cole, properly seconded, this matter was laid on the table.

PROGRAM

Dr. Clevenger read a paper on "Infections of the Mastoid—Skiagraphy and Other Aids to Early Diagnosis."

Impression that the ear canal must show pus in purulent mastoiditis is erroneous. The mastoid may be practically a closed cavity due to small or abnormally placed antrum. Such an occurrence may result in facial paralysis by affecting the position of the stapes and in turn injuring the facial nerve. Cells are present in many infant temporal bones as shown by a series of postmortem cases, numbering 150, thus contradicting the impression that early life excludes mastoid cells.

Skiagraphy as an aid to diagnosis in mastoid affections is of great service to the aurist in every instance and should be entrusted to the hands of experts only. All mastoid affections should be skiagraphed before operation and all discharges should pass through the hands of the expert bacteriologist. The capsulated cocci, when present, in the mastoid cells, ordinarily means surgical intervention, while the non-capsulated cocci infections will in most instances correct themselves in a short period of time without operation or without loss of hearing.

Early definite diagnosis in purulent mastoiditis of very great importance, especially as relating to character of bacterial involvement present, as many lives may be saved by prompt drainage, thus avoiding meningeal complications, brain abscess, etc. Meningeal complications unlikely when infection shows absence of capsulated cocci and this fact of great importance.

Typical symptoms of mastoiditis, as ordinarily understood, in a great many instances absent in dangerous ear affections due especially to different anatomical formations of mastoid region. Every subject showing a middle-ear involvement should therefore be skiagraphed and when possible to procure pus the same should be cultured. If streptococcic in nature, surgery is always indicated and at once. If discharge shows absence of bacteria or the non-capsulated cocci are present surgery may be deferred.

As definite aids to early diagnosis blood and leukocyte count and objective symptoms, such as redness of posterior bony canal wall in region immediately over the antrum, deafness of middle-ear type when accompanied by mastoid symptoms, three points of tenderness, namely, antrum, tip and vein, change of color and position of drum membrane without or with discharge, high temperature or subnormal temperature following history of middle-ear disturbance, skiagraphic production and bacteriologic tests are all

definite aids to early diagnosis which should materially aid in preservation of hearing and of life.

Dr. Cole's paper dealt with the Roentgen-ray diagnosis of mastoid disease.

Synopsis of paper on "Roentgen-Ray Diagnosis of Mastoid Disease" by Dr. A. M. Cole.

The Roentgen ray is not required in the diagnosis of all mastoid diseases, but it is very valuable in many types. Since we know that mastoid disease may exist without any symptoms, the Roentgen ray should always be resorted to, especially when we have definite symptoms about the head and sepsis when no other source of infection has been found.

The technic of making the plates is to avoid superimposing one mastoid on the other. With certain angulation of the tube we may accomplish this and get a clear impression of the mastoid cells.

The interpretation of the plates is difficult, especially in the acute types of mastoiditis. The otologists and roentgenologists must work hand in hand and all symptoms and Roentgen-ray findings must be correlated. In the acute type, before the breaking down of the bone, we get a slight haziness of the cells. After beginning necrosis we have the cells without sharp outlines and the more advanced the process the greater the deviation from normal on the Roentgen plates.

We must always plate both mastoids in order to have comparison. The greatest value of the Roentgen ray is in the differentiation of the acute type, or to know when the inflammatory process has gone on to a necrotic stage. This may give the surgeon the best evidence of when to operate and when to wait. The Roentgen plate of the mastoid may also give valuable anatomic evidence, especially as to position of the lateral sinus.

Dr. Langdon read a paper on the "Bacteriology of Mastoiditis."

DISCUSSION

DR. LAYMAN: The diagnosis is the most important phase. Three fourths of the patients recover without operation. Indications for operation are (1) diminution (sudden) of discharge; (2) the presence of the points of tenderness. Long drainage is bad. Roentgen ray and transillumination are decided aids to diagnosis.

DR. WHITTAKER: We must recognize the difference between the child and adult mastoid. An instance was given of case in which grippy sensations were followed in five days by pain in the ear, brain symptoms, operation and death. Roentgen ray might have helped to an earlier diagnosis.

DR. TOMLIN: Older chronic cases cause the most trouble. They often give history of symptoms for years past. Roentgen ray is beneficial. Cheatham of London found difference in the two mastoids in only 7 per cent. of cases.

DR. HOSKINS: No place has been assigned to the influenza bacillus. Does it cause mastoiditis or does it merely pave the way for more virulent organisms?

DR. STERNE: Many symptoms on side of nervous system show vertigo and headache. The differential diagnosis of subtentorial and mastoid troubles is to

be considered. Absence of pain in chronic types important. An instance of thrombosis of lateral sinus extending down to bulb and including 3 inches of jugular vein in which case there was no tenderness over jugular or sinus.

DR. CLEVENGER (closing): Two mastoids in same subject not always similar.

DR. COLE (closing): There is not a great deal of difference in the two mastoids. In eighty cases observed by a German physician, no variation was noted in mastoids. There is a marked variation in the frontal sinus.

DR. LANGDON (closing): As to Dr. Hoskin's question not much is known about the rôle of the influenza bacillus. It is sometimes found but always with other organisms.

Meeting adjourned. Attendance, fifty-nine.

Meeting of Jan. 18, 1916

Meeting called to order at 8:15 by the president. Minutes read and approved. Four new applications read for first time. A communication from U. S. Department of Labor Children's Bureau concerning Baby Week, March 4, 1916, was read.

Dr. Mumford moved a committee be appointed to cooperate with Children's Bureau to consider Baby Week and make it a success. Motion carried and Dr. Mumford appointed chairman.

PROGRAM

Paper, "Indications for Infusion in Children," Dr. Torian.

The indications for introduction of blood into the human body are: 1. Blood diseases. 2. Debilitated conditions with malnutrition and simple anemia. 3. Simple hemorrhage. 4. In connection with surgical operations. 5. Hemorrhagic conditions. 6. Infections of pyogenic origin, or any infectious diseases, including the contagious. 7. The intoxications.

Transfusion has been used a great deal in pernicious anemia, especially as a process preceding splenectomy. In simple hemorrhage it supplies the lost blood and increases the coagulability, as in hemorrhages from ectopic gestation and typhoid, and in melena neonatorum. It has far surpassed the older methods of treatment and has been known to succeed in many cases where the introduction of foreign serum has failed. It is often of great benefit preceding an operation, where the patient is anemic and run down.

In the hemorrhagic conditions of purpura and hemophilia it should be used in small doses prophylactically every few months. It has changed the picture very often in some of the severe infections, such as pneumonia, diphtheria and scarlet fever, and by injecting from 80 to 300 c.c. of convalescent blood intermuscularly in scarlet fever, the results have been remarkable, in the cases reported. In one case of erysipelas the patient's temperature fell from 105 to normal in twenty-four hours. The patient was cured.

Four personal cases are reported: One a case of tuberculosis, one of malnutrition with diarrhea, and one of melena; also one of pneumonia cured. Transfusion should be much more extensively used, especially in the anemias, infections and contagions where it has given some wonderful results and has opened up a field which is likely to be much used with great benefit in the future.

Paper, "Test for Hemolysis and Agglutination Preceding Transfusion," Dr. Bernhard Erdman.

Dr. Erdman gave a definition and spoke of the importance of making this test in all cases where transfusion is contemplated. He reviewed some of the literature, especially that of Bernheim of Baltimore. Bernheim's paper called particular attention to the grave danger of hemolysis—reported a death due to same—standard test used by writer described in Kolmer's work, "Infection and Immunity."

In the tests made by the writer hemolysis occurred but once. Bernheim's statistics quoted 800 cases, his own and others—fifteen cases of macroscopic hemoglobinuria with four deaths. He reported the work of Mr. Summers of the Indiana University School of Medicine on the importance of the test in all the cases where transfusion is contemplated. It is best for the safety and well-being of all concerned.

Paper, "Technic and Report of Cases," Dr. J. V. Reed.

There was no abstract filed with the secretary, and consequently no comment is made on this paper in these minutes.

DISCUSSION

DR. MUMFORD: Marvelous results are had from transfusion in children and the use in infectious diseases. Scarlet fever is to be borne in mind. It opens up large field, namely, septicemia, etc. The blood should be tested for hemolysis and agglutination as a preliminary measure. There are many methods. I have injected in two cases into the muscles with good results. Lindaman tubes are questionable on account of easily broken capillary ends. I do not wait until the patients are moribund.

DR. GATCH: Transfusion used for many years. The direct methods no longer to be used. I have recently used only the Kimpton-Brown tube which ought to be cut down on the vein. Indications: postoperative hemorrhage, uterine hemorrhage, leukemia, typhoid, infectious arthritis and pneumonia. A large field in infectious diseases but not entirely worked out.

CASE 1.—Extra-uterine hemorrhage very severe; pulseless; 600 c.c. of blood from husband. Better color; pulse, 140 in two days; 120 and then to normal. Operated (abd.) five weeks later. Good condition. Amount of blood used, 500 to 900 c.c. Interesting method is autotransfusion. Results good. Transfusion for gas-poisoning an excellent measure.

DR. SEGAR: Transfusion is life saving.

CASE 2.—Performed by Dr. Lindaman for bronchopneumonia (child). Difficult to insert needle, Dr. Vincent of Boston using Kimpton tube for melena neonatorum. Best means of combating scarlet fever and erysipelas. General practitioner ought to have access to convalescent patients at a contagious disease hospital. Direct transfusion best. Sodium citrate in 1 per cent. solution nontoxic. Anesthesia is not contraindicated.

GENERAL DISCUSSION

DR. KITCHEN: One very simple method not mentioned; possibly by Steele of Philadelphia. Needle inserted in arm of both donor and recipient by a tube of same calibration as needle. Obviates possibility of clots being injected into recipient.

MR. MARSH: Student. Sodium citrate 0.2 per cent. solution best.

MR. SUMMERS: Student. Agglutination in 4.8 per cent. of cases.

DR. TORIAN (closing): Animal serum to be used intramuscularly.

DR. ERDMAN (closing): V. C. Vaughn, Jr., has a simple method. He uses a combination of citrate and syringe method—5 c.c. of citrate, 15 c.c. of blood and injects.

DR. REED (closing): Blood from convalescent infectious diseases ideal, but antibodies in any blood will accomplish good.

Meeting adjourned. Attendance, sixty-eight.

LESLIE H. MAXWELL, Secretary.

THE MUNCIE ACADEMY OF MEDICINE

Meeting of Dec. 10, 1915

Dr. G. R. Andrews, acting as quiz master, made a very clear exposition of the physiology of respiration, the interchange of gases and the phenomena due to excess of certain elements. His argument went to show that there were no toxic elements in expired air. When discomfort is experienced in a crowded and poorly ventilated room it is due to temperature and humidity rather than to carbon dioxide. He further demonstrated that oxygen in excess is a toxic element.

Dr. C. A. Ball read a paper on "Hay Fever," saying: Hay fever as a clinical entity dates back to the days of John Bostock, 1819. While his description of symptoms is classic, his knowledge of its etiology was faulty for he attributed it to the sun's rays. In the United States we have two distinct hay-fever seasons, the first coming the latter part of May and lasting till the middle of July, the second starting the last week in August and continuing till October. Wyman, in 1872, recognized pollen of ragweed as one of the causative factors in the autumnal variety. Dunbar, in 1903, was first to make much practical use of this knowledge. He experimented on himself and some of his students who were sufferers from this disease and established the fact that various pollen are the causes of hay fever. Every hay-fever patient should be carefully examined by a competent physician, for there may be a number of conditions that interfere with normal nasal secretion. Many patients are benefited by proper treatment of nose, throat and accessory sinuses; but the pollen theory and treatment seem to represent the best present-day thought on the subject. Passive and active immunization is proving successful. Each victim of the disease has his own besetting pollen. However, hay fever is a complicated affection, a part of a symptom complex in which asthma, bronchitis and a disordered nervous system may play a part; so let us not neglect either local or general treatment if we intend to give our patients relief.

Adjourned.

Meeting of Dec. 17, 1915

Dr. W. J. Molloy read a paper on "Pulmonary Emphysema," from which the following was abstracted: This is a chronic disease of the lungs with dilated vessels and infundibula with atrophy of walls, resulting in incomplete aeration of blood and dyspnea. Its etiology may be traced to heredity, defects in elastic fibers, various diseases, such as asthma, whooping cough, etc., glass blowing, playing

of wind instruments and excessive muscular effort. Objective symptoms are increase in the antero-posterior diameter of the chest, impaired respiratory movement, bulging of the intercostal spaces, distention of the cervical vessels, cyanosis and fulness of the abdomen. Vocal fremitus is decreased. Prognosis is unfavorable to recovery. The presence of a persistent bronchitis is a grave complication. Patients die of cardiac dropsy, pulmonary congestion, gradual feebleness or slow suffocation. Treatment consists in the removal of any condition, occupational or otherwise, that is unfavorable. Extremes in climate should be avoided. Tuberculin is generally recommended, but no drug has much effect on the diseased tissue. Ammonium chlorid, digitalis and strophanthus may be indicated.

Dr. Stephens read a paper entitled "Chronic Bronchitis," saying: Chronic bronchitis is a chronic catarrhal inflammation of the mucous and submucous coats of the bronchial tubes, and coughing is the one constant symptom. It is a disease of middle life, is rarely fatal, and may last twenty years or longer. There is not much pain and but little fever unless complicated by fetid accumulations, the patient often being well nourished. There are five types of the disease: 1. Simple bronchitis, the expectorate being frothy mucus of varying amounts. 2. Dry bronchitis, characterized by severe paroxysmal cough with but little expectoration. 3. Bronchorrhea, characterized by large quantities of serous watery expectorate. 4. Purulent bronchitis, usually accompanied by elevation of temperature regulated by collection and expulsion of the contents of pus cavities. 5. Putrid bronchitis, where the odor of the expectorate, due to moulds in the secretion, becomes almost intolerable, and may finally be complicated by gangrene of the lung. It is often difficult to differentiate from pulmonary tuberculosis. In the later stages treatment is unsatisfactory.

The papers were earnestly discussed by Drs. Hollis, Trent, Morrow, L. L. Ball, Wadsworth, J. C. Quick, Sellars, Mix and D. M. Green, and several interesting cases were reported as illustrations of various phases of the subject.

Dr. O. E. Spurgeon read a case report from Cabot and submitted it to the academy for diagnosis. Drs. Quick and Sellars most nearly approached the comprehensive diagnosis.

Adjourned.

Meeting of Dec. 31, 1915

Regular meeting of Muncie Academy of Medicine was held in Muncie Y. M. C. A. Building, Friday evening, December 31, and was called to order at 8:30 by President O. E. Spurgeon, M.D.

Dr. L. L. Ball read a paper on "Hemoptysis," saying: Hemoptysis may occur from any part of the air passages, such as nose, throat, trachea, bronchi or lungs. Any hyperemia, inflammation, ulceration or injury of respiratory tract may produce hemorrhage. Hemorrhage in phthisis is more or less characteristic of the disease. In later stages the nonpurulent sputum is often streaked with blood which comes generally from the bronchial mucous membrane. Profuse and alarming hemorrhages occur from the rupture of aneurysmal bulbs in a cavity or from rupture of an ulcerated vessel; it may be from 2 or 3 ounces up to a pint or more in quantity. In treat-

ment, first calm the fears of the patient and command absolute mental and physical quiet. Administer morphin and atropin. Apply cold to the chest and warmth to the abdomen and extremities. Give no ergot, alum nor digitalis. If symptoms of collapse appear grave, camphor, nitroglycerin or strychnia may be given. As a last resort salt solution by rectum or subcutaneously may be administered.

A paper on "Hematemesis," was read by Dr. R. E. Cole, who said: Vomited blood is usually clotted, mixed with particles of food and acid. It may be dark, grumous or fluid. If a small amount has remained in the stomach long enough to be partly digested, it occurs in brownish-black particles giving the appearance of coffee grounds. Hemoptysis may occur with almost no coughing. Violent vomiting may excite a cough, and on the other hand blood which has been coughed up may be partly swallowed and excite vomiting. The blood may have entered the stomach from the esophagus or duodenum previous to being vomited. In most cases, however, the stomach is the source of the blood. It may be from congestion of mucous membrane, from erosion, ulcer or cancer. Ulcer is most frequent cause of hematemesis, cancer next, cirrhosis of liver next, and splenic anemia fourth. There are but two common causes of the vomiting of an ounce or more of blood; these are peptic ulcer and cirrhosis of liver. When an alcoholic vomits blood, it is often impossible to decide whether the hematemesis is due to cirrhosis or to congestion of stomach. The corrosive poisons, arsenic, strong acid and alkalis may be responsible for streaks of blood in the vomitus. It has been observed in severe malarial fevers, typhus fever, epidemic influenza, relapsing fever, yellow fever, malignant smallpox and dengue. It has also occurred in phosphorus poisoning and acute yellow atrophy of liver. An infant may vomit blood from a fissured nipple while nursing. Blood from a bitten tongue may be vomited after an epileptic seizure. Blood from an epistaxis may be swallowed unconsciously. Hematemesis often occurs after operations for adenoids or tonsillectomy.

The papers were discussed by Drs. Morrow, Wadsworth, Molloy, Spurgeon and C. A. Ball, the latter emphasizing the important part mitral stenosis may play in hemoptysis, especially in persons past middle age.

Adjourned.

Meeting of January 14

Dr. O. E. Spurgeon read a paper on "Mediastinal Tumors," saying: Benign growths in mediastinum are rare. Malignant tumors are common. Sarcomata occur five times as frequently as do the carcinomata. Sarcoma is usually primary while carcinoma is usually secondary to carcinoma of lungs, bronchi, esophagus or some neighboring epithelial structure. The anterior mediastinum is much more commonly affected than either the middle or posterior divisions. It is not possible to differentiate between a pulsating sarcoma and a pulsating aneurysm by means of Roentgen ray. We should bear in mind that some sarcomas pulsate and that not all aneurysms pulsate. Next to the Roentgen ray the most noticeable indication of a mediastinal tumor is afforded by disturbances in the circulation for which it is responsible. This consists of a leaden or livid hue of coun-

tenance, dyspnea on exertion or dyspnea with attacks of syncope, vertigo on stooping or bending forward, roaring in ears, deafness, edema of face, of neck, or of upper part of thorax, venous engorgement and in some cases dropsy or ascites. Numerous complications may occur; edema of upper part of body or of entire body or effusion into pleural cavity may occur. The thoracic duct may be pressed on causing obstruction, then emaciation develops rapidly. In advanced stage of sarcoma certain positions of the patient may cause pain. The treatment of mediastinal tumors is largely palliative. A few cases of benign tumors have been removed surgically. Radium is given credit for having cured a number of cases of lymphosarcoma, this being one of the most malignant tumors known; strangely enough it is the easiest cured by radium rays. In some cases treated by radium all the bad effects of the malignant diseases disappeared, but the Roentgen-ray picture still revealed presence of tumor mass. I wish to call attention to the fact that Dr. S. P. Beebe, recently professor of experimental medicine at Cornell University, has used a mixture of vegetable proteins and a number of other substances, the combination of which is called autolysin. The claim is being made that this has cured various kinds of malignant diseases, both sarcoma and carcinoma.

Various points in the address were illustrated by microscopic slides furnished by the speaker, and Roentgen-ray plates taken by Dr. Kirklin at the laboratory of the Home Hospital.

Adjourned.

Meeting of January 21

Dr. Kirklin conducted a quiz dealing with "Bacteria Invading the Chest."

Dr. C. A. Ball read a paper on "La Grippe," saying: I regret that conditions here, and I take it elsewhere as well, are such that trustworthy cultural and microscopic studies of nasal, pharyngeal and bronchial secretions are not available. The more I think about it the more I feel that Dr. Hurty's plan for all-time health officers and a laboratory managed by the board of health is the only practical solution of the problem.

The influenza bacillus is generally accepted today as cause of epidemic influenza. In some patients with a disease clinically resembling influenza the influenza bacillus cannot be found. The presence of pneumococcus, staphylococcus and streptococcus has been reported in similar acute infections resembling influenza. So we see that the bacteriologist as well as the clinician is not clear in these acute infections. Onset of disease is usually sudden, with a chill, or chilly sensations, temperature rises rapidly, headache may be extreme and is usually frontal or orbital. Soreness and aching of muscles of back, arms and legs is usually marked. There is usually some irritation of nose, pharynx, tonsils, larynx or trachea, but in some cases which I have thought were true la grippe such respiratory symptoms were not present at onset, or may not have occurred at all. In fact, gastro-intestinal symptoms predominate in some cases. The disease is doubtless a toxemia and depending on the localization of the toxins, certain types of influenza have been described; namely, respiratory type, nervous type, gastro-intestinal type, and febrile type. I shall mention the complications in

influenza according to their importance. Pneumonia is one of the most frequent complications, and probably the most serious. Its frequency varies in different epidemics and in various localities. It is usually the bronchial type, and area of consolidation may be so slight that diagnosis from physical findings is difficult, if not impossible. When lobar pneumonia occurs as a complication the pneumococcus is probably the cause. Treatment of pneumonia is similar to treatment of pneumonia any time. Heart sometimes presents chief complicating problem. The condition may be one of cardiac irritability or myocardial insufficiency. I consider it of prime importance at beginning to put the patient to bed and keep him there. I have treated the patient along general lines, advising light diet and plenty of water internally. I have found it agreeable on account of the great headache and general aching to use some of the antipyretics. Opiates have been used when indicated, as have preparations for cough and other distressing symptoms. I think local treatment of nose, throat and bronchi give our patients much relief and also enable us to decrease the amount of risk from contamination. Sprays, gargles and inhalations of steam I have used. I have no quarrel with those who are advocating the use of vaccines, probably their patients get along as well as mine, but my results have been uniformly good and complications few.

Adjourned.

H. D. FAIR, Secretary.

FORT WAYNE MEDICAL SOCIETY

Meeting of Oct. 26, 1915

The Fort Wayne Medical Society met in the assembly room of the courthouse in regular session, with twenty-five members present. The meeting was called to order by the president. The minutes of the preceding meeting were read and approved as read.

Dr. G. W. McCaskey reported a clinical case. There was no discussion.

Dr. McCaskey reported three cases of aortic disease in comparatively young people, two of which were proved syphilitic and the third probably was although chancing to have a negative Wassermann at the time of examination. He considers aortic disease in patients under middle age as strongly presumptive of syphilis.

The first case, a man of 27 years with a double aortic bruit, illustrated the danger of trusting to a single negative Wassermann. He was told to return, but failed to do so. Several months later he turned up again with irreparable heart damage, syphilis having in the meantime been demonstrated.

The second case, with severe aortic regurgitation, was a woman, aged 40, who gave a history of dyspnea and anginal attacks of several years' duration, which recently had become much worse. There was no other suggestion of syphilis, but the Wassermann test was strongly positive. The luetin test was also done in this case but was negative.

The third case, a man aged 30, with advanced aortic disease, gave a negative Wassermann, but was probably syphilitic. He was subjected to an abdominal exploration because of anginal pains, which were mistakenly referred to the abdomen and died suddenly in the beginning of anesthesia.

In late life aortic disease is more commonly non-syphilitic, but even then the luetin and Wassermann tests should both be made.

Cholecystectomy, Dr. H. A. Duemling.

NOTE.—The discussion on Dr. Duemling's paper was postponed until next meeting night because Dr. Duemling was called away from the meeting.

A report of the committee appointed on nonresident membership received. The motion carried the adoption of the following resolution, to wit:

Resolution presented for the purpose of changing the by-laws of the Fort Wayne Medical Society:

That the ninth line of Section 4 of the by-laws be changed to read as follows—that after the word, county, shall be inserted the following words, "except that he shall pay three dollars annual dues."

And that the twelfth line be changed to read, after the word "Society" "to be defended by the Society in malpractice suits."

Bill of the Keefer Printing Company for \$2.50 allowed. Motion made that Dr. M. F. Porter, Jr., and the secretary act as a committee to arrange for the annual dinner, that the plates be \$2 and that the dinner be "stag."

Meeting adjourned.

Meeting of Nov. 2, 1915

The Fort Wayne Medical Society met in regular session in the assembly room of the courthouse, November 2. The minutes of the preceding meeting were read and approved as read.

CLINICAL CASES

Dr. E. J. McOscar reported a case of a female of 38, with uterine hemorrhage; hemoglobin, 40 per cent.; urine contains pus. Effort made to do vaginal hysterectomy; unsuccessful owing to the size of the tumor. Abdominal section was then made; clamp was placed on the broad ligament. Following the removal of the clamp the ureter leaked and urine came through the vagina. This wound in the ureter healed spontaneously.

DISCUSSION

DR. DUEMLING: I would like to ask Dr. McOscar on just what points he bases his opinion that the ureter was perforated. I would say that this leakage came from the bladder. In a case which I saw where both ureters were tied off the patient died of the usual symptoms accompanying acute suppression of the urine; both kidneys at postmortem showed punctate hemorrhages but the pelves of the kidneys were not dilated.

DR. McOSCAR: The ureter will heal when injured, spontaneously, without doing anything to it as long as there is continuity of tissue. If this opening had been in the bladder the function of the bladder would have been destroyed, and it was not.

DR. McCASKEY: I can understand in a case like Dr. Duemling's that there would not be much change in kidney structure in seven days, but in a case where the ureter is injured, the kidney fails to secrete. After a while the kidney will functionate and the block in the ureter will produce hydronephrosis. A stone blocking the ureter will put the kidney out of commission, but if the block is produced slowly, hydronephrosis will develop. You can open a ureter

and take out a stone and it is not necessary to sew up the opening; in fact, the patient will do better if it is not done.

The paper of the evening was read by Dr. C. E. Barnett, on "When Is a Prostatic Fit for Operation?"

DISCUSSION

DR. DUEMLING: I feel exactly as does Dr. Barnett that it is absolutely necessary to prepare patients for prostatic operations. It is almost essential to drain the hyperdistended bladder before operating on the prostate. The phthalein test of the kidney efficiency is essential. All of this type of cases of mine receive a Roentgen-ray examination as a routine measure. I want to know if there are stones in these bladders or prostates. I believe that the suprapubic route is best. I used to do all through the perineal route until I had two permanent perineal fistulas. I always open these bladders high up because the cave of Retzius is easily infected and sinuses which arise as a result of this infection are extremely tortuous.

DR. PORTER: I do not believe that the prostate removed through an infected bladder does as well as one removed through a clean bladder. I think that prostatectomy done in good hands should have a death rate of 3 per cent. I am quite in accord with everything Dr. Barnett has said regarding the preparation of these patients. I think that this was one of the causes (lack of preparation) of the large death rate in early cases. Some years ago I began doing suprapubic prostatectomies, then after seeing Young of Baltimore do some perineal operations, I thought the perineal route was best, but I am firmly convinced that the suprapubic operation is best. I think that the time will come when we will do this operation as we now do appendix operations, that is, before these glands are enlarged and the bladder greatly distended and infected.

DR. McOSCAR: It is doubtful if the Roentgen ray furnishes any additional information in these cases. I do the high incision because of the danger of the space of Retzius, but in going high, care must be taken not to cut through the peritoneum.

DR. B. VAN SWERINGEN: Last week I saw Dr. Scudder of Boston take out a prostate under spinal anesthesia and it was a very beautiful demonstration. Two cases of mine, one aged 76 years, had an acute pneumonia, the other, aged 77 years, died from heart failure which came on gradually following the operation. In doing this operation with acute distention it should be done in two stages, cystotomy first for drainage.

DR. PORTER: A phthalein of 50 per cent. is not incompatible with good health. Lillienthal has done the two-stage operation for years and has had excellent results. The introduction of a catheter in these cases seems to induce a polyuria.

DR. WEAVER: Dr. Geraghty in his address at the Twelfth District Society said that 60 per cent. phthalein was normal. The prostatic who is refused his operation because of a 50 per cent. phthalein will die from the want of it.

DR. McCASKEY: The result from the phthalein test, used as a routine measure in my cases, shows that anywhere from 40 to 60 per cent. is not incompatible with good health. It has occurred to me that neutral influences, due to the disease of the prostate, might affect the kidney parenchyma in such a way that the

phthalein examination might be influenced. I would not hesitate to recommend a surgical procedure as great even as prostatectomy, other things being equal, if the patient has a phthalein output as low as 35 per cent.

DR. M. F. PORTER, JR.: Frothingham made a number of observations on individuals from day to day and found that they varied markedly. Different constitutional states will have a bearing on the phthalein output, that is, a cachexia, etc. The prostatics, if the method used is simply to collect the urine, is worse than useless for the residual urine cannot be estimated. I think that no prostatic should be submitted to operation without a thorough examination by an internist.

Dr. Barnett closed the discussion.

DISCUSSION OF DR. DUEMLING'S PAPER OF LAST MEETING NIGHT

DR. McOSCAR: There is a logical field for both cholecystectomy as well as cholecystotomy. In a gangrenous gallbladder, one obstructed by stone, etc., cholecystectomy is the operation of choice. In several hundred gallbladder cases which I have done I have found it necessary to do cholecystectomy twice. In a case of cholecystitis with stone and gangrenous gallbladder I did a cholecystectomy. Nine years after this operation I was called to see this patient with a gallstone colic.

DR. PORTER: I agree with the conclusions that Dr. Duemling read from Buchanan's article, but with the statement of Kehr, that of 400 cases of gallbladder disease, 399 were cholecystectomies, I do not think that is good surgery. The kind of gallbladder that should be removed is the gallbladder that is out of commission and it is the hardest kind to remove. It is wonderful what a gallbladder will do under drainage and how they will recuperate. I have had cases come back for cholecystectomy on which I had done cholecystotomy and probably will do more cholecystectomies in the future than I formerly did because we know more about the type of case which demands it. If you have a case with pronounced symptoms of cholangitis, a cholecystotomy is the operation of choice because of the drainage of the hepatic ducts which characterize these cases. Where you ligate the cystic duct it usually leaks and to be on the safe side you should drain.

DR. B. VAN SWERINGEN: I have not arrived at the point where I want to do a cholecystectomy in every case. I think there is a logical field for both operations. I do not know if recurrence of biliary colic attacks subjects more frequently after cholecystectomy than cholecystotomy. In a case in which I attempted to do a cholecystectomy following a cholecystotomy, I found it a very difficult operation. In cholecystitis with cholangitis and jaundice, you had better drain.

DR. HAMILTON: There are a number of cases of color hemolytic icterus in which the symptoms of gallstones are present. These cases are not infrequently operated on and nothing is found.

DR. WEAVER: In the Mayo clinic, 83 per cent. of gallbladder operations were cholecystectomies. After having followed their operations through and checking them up, I think we should profit by their conclusions.

Dr. Duemling closed the discussion.

Meeting of Nov. 8, 1915

The Fort Wayne Medical Society met in called meeting, November 8, to take action on the death of Dr. C. B. Stemen. There were fifteen members present. The meeting was called to order by Dr. G. L. Greenawalt, president pro tem. The motion was made and carried that the society attend the funeral in a body. The motion was made and carried that the society meet at 1:30 o'clock at the assembly room and proceed to the church in a body. The motion was made and carried that a committee on resolutions be appointed by the chair, the chair acting as one member of that committee. The president then appointed Drs. Whery, E. J. McOscar, B. Van Sweringen and M. F. Porter.

Meeting of Nov. 9, 1915

The Fort Wayne Medical Society met in regular session, at the assembly room of the courthouse, Nov. 9, 1915. There were nineteen members present. No clinical cases were presented. The paper of the evening on "Cholesterinized Antigens in the Wassermann Reaction" was read by Dr. Eberly.

DISCUSSION

DR. B. M. EDLAVITCH: This is the first paper on cholesterinized antigens presented to this society. The Wassermann reaction is the best we have in serology. Since its introduction into medicine we have learned more about syphilis than we ever did in an equal length of time before. As we learn more about manufacture and the behavior of the antibodies, we shall learn more about syphilis. We must confess that there are many things about the Wassermann reaction that we do not know. Different antigens give different results in different hands. One thing is certain, that if every serologist were working with the same reagent they would all have similar results. One of the difficult things to answer is, Why is not the test positive in every case of syphilis? When the test was first announced it was thought that a positive Wassermann was specific and a negative nonspecific of syphilis, but this is found not to be true. This test should be used as a link in the chain of evidence in every case and results should be expressed as either positive or negative in the same way as a Widal test is expressed. To the average physician the plus sign or the minus sign does not mean much. I do not think anything of the diagnostic value of a luetin test. I have been following up the use of the cholesterinized antigens and am convinced that the use of this antigen is perhaps superior to any other.

DR. B. W. RHAMY: I do not agree with Dr. Eberly that every one accepts cholesterinized antigens as the best. They are on trial and a mass of statistics will be necessary to decide the issue.

Alcoholic extracts miss some cases of syphilis; cholesterinized antigens are more delicate, so much so, that it is possible for some nonsyphilitic persons to give a positive reaction.

Thomas and Ivy in an article on this subject conclude that cholesterinized antigens may cause varying degrees of inhibition in normal serum. Kolmer and Schamberg (*Journal A. M. S.*, March) testing 434 cases found a 29 per cent. stronger reaction with cholesterinized antigens and 10 per cent. more delicate than acetone insoluble lipoid antigen, while alco-

holic extracts of syphilitic liver was least delicate. They obtained some reactions with normal serum which they termed pseudoreactions and due to the complement binding properties of the cholesterin. In this connection I will say that I tested out this property for my own benefit and found that using an alcoholic extract of cholesterin alone I obtained weak reactions with known syphilitic serums and negatives with normal serum.

In Kolmer and Stromberg's series in forty cases which were negative to ordinary antigens and positive to cholesterin antigens, twenty were known cases of syphilis and fourteen were probably syphilitic, leaving six cases apparently normal serums reacting to cholesterin antigens. These doubtful or pseudoreactions they gage entirely by the clinical findings. They believe the cholesterin antigens are the best guide for treatment and cure on account of their greater delicacy in finding traces of infection. On account of the complement finding properties of cholesterin it may be necessary when using cholesterin antigens to use 25 to 50 per cent. more complement. As to the effect cholesterin in the blood might have on the Wassermann test, Weston and others have found that hypercholesterinemia does not cause inhibition on account of the infinitesimal amount in the volume of serum used in the test. As to method of reporting finding I do not place much stress on the strength of the reaction for the patient either has syphilis or no. However, I report positives doubtful (\pm), slight positive (+), moderately strong positive ($++$), and strong positive ($+++$), since it seems to afford some satisfaction to physician and patient in carrying out the treatment.

As to reporting a doubtful reaction (\pm) I believe that serologists should not report these negative, but that the physician is entitled to know the exact findings. A doubtful reaction (\pm) with suspicious clinical findings indicates further study, other Wassermanns and if necessary a "provocative" dose of salvarsan or neosalvarsan. In a known case under treatment a doubtful (\pm) reaction also indicates further treatment.

DR. G. W. McCASKEY: I think the Wassermann is the most valuable of any serum test in medicine. It has been stated that a negative reaction means nothing. In those cases where an organism has been so overwhelmed with infection that the antibodies are not manufactured, a negative reaction may be present. I have no hesitancy in making a diagnosis of syphilis when the clinical signs warrant it, with a negative Wassermann reaction. I have seen some excellent results with the luetin test and I am going to use the luetin as a routine measure. As to the cholesterinized antigens, I am not going to say which is the best. If Commoner's work is true, I am inclined to favor the cholesterinized antigen. In my chronic obscure cases I am going to do a Wassermann and follow it up with a luetin test, and even in cases where the Wassermann is positive I shall also do a luetin test. I certainly could not dispense with the Wassermann reaction in practice. In a case which is clinically syphilis with a negative Wassermann and a negative luetin, I shall proceed with anti-specific treatment.

Dr. Eberly closed the discussion.

Bill of C. J. Lose of \$1.25 was allowed.

The meeting was then adjourned.

G. VAN SWERINGEN, Secretary.

KOKOMO ACADEMY OF MEDICINE

The Kokomo Academy of Medicine held its first annual banquet at Hotel Courtland in Kokomo on the evening of December 7.

Preceding the banquet, a meeting was held in the parlors of the hotel when the members were favored with a paper by Dr. Joseph Rilus Eastman of Indianapolis, who took for his subject "The Surgery of Epilepsy," reviewing the history of surgery in this disease and covering that of the present day as seen by one experienced in the work. It was freely discussed by all present.

At 7:30 o'clock a sumptuous banquet was served in the dining room to the doctors and their wives. The president, Dr. N. C. Hamilton, presided, and toasts were responded to by Drs. H. G. Grable, A. W. Holcomb, George D. Marshall, O. D. Hutto and L. M. Knepple. Our guests, Dr. and Mrs. Eastman and Dr. Paul F. Martin of Indianapolis, were unable to remain for the toasts.

The Kokomo Academy of Medicine is composed of physicians residing in the city. It is a "live" organization, holding meetings twice a month, and never failing of a quorum or essay.

WILL J. MARTIN, Secretary.

BARTHOLOMEW COUNTY

Bartholomew County Medical Society met at Columbus, January 17, in the office of Dr. Kirkpatrick, Dr. Kamman presiding in the absence of the president, Dr. Maris.

Communication from the State Board of Health, with reference to the community institute and children's health conference, was read and referred to a committee to report at next meeting.

Dr. G. T. MacCoy read an interesting paper on "Serotherapy and Vaccine Treatment," and gave a report of several cases where he had used serum early in the disease with good results. The paper brought out a free discussion by all members present, and several case reports were given which helped to make the meeting a profitable one.

Next meeting February 8.

Adjourned. JAMES W. BENHAM, Secretary.

DELAWARE COUNTY

Tuesday evening, December 7, the annual banquet of Delaware County Medical Society was held in Delaware Hotel at Muncie. About eighty physicians with their wives and invited guests were present. A splendid six-course dinner was served by the hotel management. The local-option restrictions incident to a dry town were overcome by having a liberal supply of Tanlac on tap.

The invitations announced that the entertainment would be limited to music, humor and pathos. The program was replete with the first and second, but probably the nearest approach to pathos, with the possible exception of an account of the death of Dr. George R. Green's faithful old gray saddle-horse, Prince, whose timely end was due to ventricular effusion for which his habit of wearing iron shoes during thunder storms was largely responsible, was the fact that several dress suits that had been in storage for months (in one instance, at least, years)

lacked from 2 to 8 inches of encompassing the equatorial periphery of the owners.

Dr. F. G. Jackson, chairman of the committee on arrangements, introduced the toast-master, Dr. I. N. Trent, who "presided with dignity." Dr. H. A. Cowing, on whom the mantle of J. Whitcomb Riley is expected to fall, recited a sentimental little ballad entitled, "Why is a Banana Skin?" which provoked salvos of applause.

Dr. U. G. Poland, a former secretary, read what was presumably the minutes of a meeting of the Delaware County Medical Society held twenty-five years ago. The subject for discussion was "Landandum Puseosa," and several members present cited numerous cases where anticipated suppuration progressed nicely week after week, finally resulting in 100 per cent. recoveries. Apparently for the purpose of contrast, the toastmaster called for the minutes of the last session of the society, which fortunately included a surgical case report. A man accidentally received a scalp wound. He was hurried to the hospital, into the operating room, that had been flushed with filtered and sterilized air. His resistance and reactions were tested, leukocyte count made, the activity of his antibodies estimated, his degree of anaphylaxis determined and at the opportune moment when his blood pressure and respiration rate were just right, the skilful surgeon, stimulated by repeated thought impulses radiating from the enthused yet awed spectators, did a remarkably clever coaptation. The patient was put to bed and the whole hospital machinery was set in motion for his care and comfort, but, alas! the patient died.

The toastmaster's request for additions or corrections to the minutes, gave Drs. F. E. Hill, C. M. Mix, D. M. Green and O. E. Spurgeon a chance to test their humorous reflexes, with the result that many sallies of wit having a local interest and doubtful import kept the audience in suspense waiting for the next move.

Dr. C. A. Ball, president-elect, was presented with a 12-carat diamond secured by popular contribution.

The program for the evening closed with an original telephone monologue by the toastmaster which particularly pleased the ladies present.

The officers for 1916 are: president, Dr. Clay A. Ball; vice president, Dr. F. W. Dunn; secretary-treasurer, Dr. H. D. Fair (reelected); censor for three years, Dr. Howard Drumm.

Adjourned.

Meeting of January 7

Regular meeting of Delaware County Medical Society was held in Muncie Y. M. C. A. Building, Friday evening, January 7, and was called to order at 8:15 by President C. A. Ball.

Dr. W. W. Wadsworth read a paper entitled, "The Problem of Our Insane," saying: When we consider that the quarter million insane and feeble-minded in the United States exceeds the number of students in all our colleges and universities in the nation, and that this vast number of unfortunates is increasing at the rate of over 35,000 annually, have we not an insane problem? Three fourths of these dependents range in age from 18 to 50 years. The United States Commissioner of Labor has estimated the value to the community of an adult between 18 and 50 years

at \$600 per year. Computed on this basis the nation sustains an annual loss of \$112,500,000 from its non-productive wards. This added to the \$45,000,000 cost of annual maintenance shows a yearly loss of \$157,500,000. When we add to this two billion in permanent investment in our varied institutions for so-called treatment, charities and correction, we surely have some problem. Are we interested in it? The same system of selecting an insane commission and conducting an inquest prevails today as fifty years ago. The first knowledge the accused may have is arrest and incarceration in jail with murderers, thieves, rapists and other vicious or criminal characters. When, after a farcical trial and commitment he finally arrives at an institution, how much better off is he? Our madhouses and asylums have, by grace of legislative hyperbole, progressed to the dignity of hospitals in name, but remain, in fact, institutions for confinement, segregation and custodial care of the mentally sick.

Forty per cent. of the state's gross budget is expended for custodial care (or legal detention of the insane, for the safety of the sane) but not a dollar is appropriated by any one of the forty-eight sovereign states for serious study and research into the cause of insanity, that it may be properly treated and prevented. The Department of Agriculture is spending over \$16,000,000 annually in studying diseases of cattle, horses, swine, sheep, poultry and fish, while the Department of Public Health goes begging for an adequate appropriation to study the causes underlying insanity. We point with pride to almshouses, schools for feeble-minded and "hospitals" (?) for insane as evidence of our progress and philanthropy, but which are in reality memorials to our ignorance and stupidity and the spoil of a horde of political parasites. Men without special training, knowledge or experience, whose autocratic power is greater than that of a king, are appointed to important positions. Public moneys are expended for custodial care, but not cure.

With the present public conception of a modern hospital no arm of the service is more important than nursing. A hospital for cure would be useless without its corps of trained nurses. The individual bereft of reason is more like a child, mentally, than an adult. Can we imagine anything more cowardly than a strong man or woman beating a child or attempting to control it through fear and intimidation? Yet the prevailing system of discipline in many state and private institutions is one of brutal punishment for slightest infractions of rules, and is justified by the management for its "moral effect," which is intimidation.

All alienists agree that the cure of insanity depends on its care, treatment and proper nursing. This treatment must be individual, not collective. Can an insane person be restored to reason by the treatment which would drive a sane man crazy? Yet victims of insanity are expected to recover their reason in an atmosphere and under a system of unreason. Can brutality beget love, confidence and peace of mind? Can ignorance impart wisdom or darkness reflect light? Mind is reciprocal with mind. It acts and reacts according to its stimuli. The moral of all this contention is, if we would have healthy minds in or out of an institution we must provide healthy conditions. This can be done only by popular educa-

tion. During the early stages of dementia almost all patients have lucid intervals and are rational on most subjects. Treatment should aim to prolong the lucid interval and increase interest in rational subjects. What the insane person most needs is a friend, companion and teacher. He is in a state of mental doubt and darkness and needs a guide; some one who can point the way out.

Early diagnosis and treatment are imperative. The cause or causes, physical or mental, should be ascertained and removed, if possible. How and where can this study best be done? Should the patient be permitted his liberty, or restrained. If restrained, how?

Under our present laws there can be no infringement of personal liberty without due process of law. If charges are preferred, process served, and he is found to be of unsound mind in a court of lunacy, in a justice of peace court, he may be placed under guard at the expense of friends or relatives or sent to jail as a criminal to await commitment to an overcrowded institution.

Recommendations: 1. Substitute farm and other industrial colonies for the institutions. 2. Use the institutions now established as psychiatric hospitals and training schools for physicians and nurses of this state, free of expense, for postgraduate work. 3. By legislative act make possible the voluntary commitment on the request of an individual or relative or friends, on the recommendation of his physician, thus avoiding the notoriety, stigma and expense of an inquest. This would open the doors of the institution for early study and possible prevention of advanced and often hopeless cases of alienation. 4. We should have detention wards in our local hospitals for persons awaiting commitment. 5. Employ only physicians and nurses trained for the work, whose mind and heart are in the work. 6. The conduct of insanity inquests by boards of health under the direction of the circuit courts, instead of justices of the peace. 7. Finally, add mental hygiene to the school curricula, with night session for parents.

The discussion was opened by Dr. C. L. Bock, who contended that the most urgent and potent phase of the problem is prevention. Dr. Bock believes that children of neuropathic parents or those having a bad heredity should have their physical bodies developed rather than the intellectual. Such children bear heavy mental stress poorly. Dr. Bock also believes the propagation of the unfit and all defectives should be prohibited. Each hospital should have a field worker, together with eugenic and social workers for the study of families coming under their observation.

Rev. E. G. Mason, pastor of the Universalist Church, was present and made some very interesting comments on the general conditions surrounding the insane.

Mr. C. A. McGonagle, state senator, also made a plea for a public sentiment that would demand the enforcement of such laws already enacted and additional ones looking to the betterment of sociologic and civic conditions. Mr. McGonagle is a member of a committee appointed for the purpose of getting more accurate statistics regarding the number and status of the feeble-minded and epileptic of our state, and to make some recommendations for more adequately dealing with their problems.

Adjourned

H. D. FAIR, Secretary.

DUBOIS COUNTY

Dubois County Medical Society met at the City Hall in Huntingburg December 21 at 1:30 p. m., President Kelso in the chair, and fourteen members present.

Minutes of previous meeting were read and approved.

President appointed Committee on Arrangements and Program Committee for the next meeting of the Third District Society, as follows: Program Committee, Drs. J. P. Salb, E. G. Lukemeyer and O. A. Bigham (this committee also to act as a permanent program committee for the society for 1916); Arrangements, Drs. Henry C. Knapp and A. F. Gugsell.

After some discussion on the question of active practitioners belonging only to the county medical society it was decided to abide by the ruling of the State Association, and henceforth all active practitioners in the county who wish to belong to the local society must also become members of the State Association.

It was voted that the society subscribe for the Necroscopy Reports of the Massachusetts General Hospital, and that a portion of the time at each meeting be devoted to a discussion of these reports. This is an innovation which it is hoped will prove to be interesting and of benefit to the membership.

Ruling was made that each member who agrees to read a paper before the society and then fails to do so, without a legitimate reason, shall be fined a box of fifty 10-cent cigars.

Case reports: Dr. Baker reported case of dislocation of semilunar cartilage of knee, with subsequent synovitis. Good recovery.

Dr. Ehrich (guest) reported a case of apparent anthrax which proved to be self-inflicted carbolic-acid burns of a "nervous" woman.

Essay by Dr. William S. Ehrich, Evansville, "Kidney Infections, Nontubercular." Infection of the kidney may take place in two ways, by infecting organisms being deposited by the blood current or from infection of the lower urinary tract ascending through the peri-urethral lymph channels. Infection may be taken directly to the pelvis by instruments or by obstruction in the lower tract caused by pressure within the ureter, namely, stone or by urethral obstruction as stricture or adenoma of the prostate; by pressure from without from neoplasms of the intestines or uterus.

The relative frequency of the infecting organisms was given as follows: Colon bacillus, first; *Staphylococcus albus*, second; streptococcus, third, and usually occurring as a secondary infection; typhoid bacillus, fourth; tubercle bacillus, fifth, and next the gonococcus. It is truly remarkable how rarely the gonococcus attacks the kidney. There seems to be a special resistance to this organism; after these come *Bacillus faecalis alcaligenes* and the pneumococcus.

Symptoms.—Pain may be in loins, but most frequently referred to bladder. In the male pain is frequently referred to testicle. Frequency of urination is an invariable symptom. There may or may not be tenderness over kidney. The urine is usually acid, contains pus and sometimes blood cells, albumin is always present and occasionally a few hyaline casts. Temperature is elevated.

Cystoscopically the picture is different than we would expect to see where there is so much bladder

irritation. Often the bladder shows no change, but at times there may be slight reddening, the urethral orifices are often very much inflamed, and when there is a considerable amount of pus it can be seen spurting from the ureter. With the cystoscope it is easy to differentiate pyelitis from cystitis. The differentiation from pyelonephritis is impossible except at postmortem.

Treatment internally. Hexamethylenamin is always administered if urine is acid. If alkaline urine, combine sodium benzoate. Vaccines, if properly used, are a valuable aid. Autogenous vaccines preferred where possible to obtain. If this cannot be done, a culture and smear of organisms should be made and the corresponding stock used.

If the above methods fail to effect a cure, lavage of the kidney may be resorted to. For colon bacillus infection, Knoll's solution of aluminum acetate is recommended; for other infections argyrol or col-largol solutions.

In only the most extreme cases is surgery resorted to and then the kidney is either drained or removed as the conditions warrant.

Attention called to pyelitis occurring during pregnancy. This condition, formerly called pyelitis gravidarum, but as has been shown, probably existed before pregnancy and the pressure of the uterus causes it to become more severe.

Case reports by essayist.

Discussion by Dr. Harvey K. Stork. He cited a case seen with the essayist.

Dr. Louis Lukemeyer reported two cases following attacks of influenza. Recoveries. He raised the point that the average practitioner did not have the equipment and experience to cystoscope these cases.

The essayist answered that only a small proportion required to be cystoscoped, and that these cases had best be referred to the urologist.

Dr. J. P. Salb emphasized the necessity of correctly diagnosing these cases, and discussed their surgical significance.

Dr. E. E. Steinkamp brought up the question of why the gonococcus so rarely figured in these infections.

The essayist answered that it was due possibly to the difference in structure of the cells in the various sections of the genito-urinary system. He cited the difference in embryologic origin of these cells and that the gonococcus rarely attacked higher than the posterior urethral region.

Dr. Baker discussed the administration of hexamethylenamin in these cases. He cited a recent case treated with autogenous vaccine.

The society voted to hold its January meeting at Huntingburg.

Adjourned.

Meeting of January 18

Dubois County Medical Society met in City Hall at Huntingburg, Tuesday, January 18, with six members present, Dr. E. G. Leukemeyer acting as chairman.

Minutes of previous meeting read and approved.

Case reports of the Massachusetts General Hospital were discussed.

The society voted to take action on the request of Dr. F. R. Green and take up the "Baby Week" movement.

Next meeting to be held at Huntingburg.

Adjourned.

H. M. BAKER, Secretary.

LAKE COUNTY

Lake County Medical Society met in regular session, January 13, at Gary Public Library, Dr. Miltimore presiding. Attendance, sixteen members and two visitors.

Applications for membership received as follows: Drs. F. P. Cox, Indiana Harbor; R. O. Wharton, A. P. Hitchcock, W. F. Julien, L. T. Loar and O. B. Nesbit, all of Gary—the latter by transfer from Porter County Medical Society. On a favorable report from the censors, the applicants were duly elected.

The secretary reported the results of tabulation of answers to a number of questions sent to members last month, asking opinions as to programs and future meetings of the society. Many good suggestions were sent in in response to the questions.

Dr. Carl B. Davis, Chicago, presented an illustrated talk on "Cancer of the Rectum," following which a general discussion was held.

Adjourned. E. M. SHANKLIN, Secretary.

SPENCER COUNTY

Spencer County Medical Society met at Rockport, December 21.

Report of secretary-treasurer of society read and accepted.

Election of officers resulted as follows: president, A. M. Bean, Chrisney; vice president, C. W. Beadley, Gentryville; secretary-treasurer, H. Q. White, Grandview; censor, three years, H. G. Weiss, Rockport.

Voted to hold at least four society meetings at Lincoln City during summer months. A committee was appointed to arrange a program for the ensuing year, consisting of Drs. DeTar, Weiss and Gwaltney.

Voted to hold tuberculosis clinic at monthly meetings, and tuberculous people invited to attend same.

Adjourned.

Meeting of January 18

Spencer County Medical Society met in Rockport City Hall, January 18, President A. M. Bean in the chair.

Dr. Bean read an excellent paper of general interest to the society, which should have been heard by every member of the society. Dr. H. Q. White read a paper on "Child Welfare," which was also good. Neither of these papers were discussed.

Items of interest to the society were discussed. Dr. Eva J. Buxton was reinstated as a member of the society.

February meeting to be held third Tuesday in February at Rockport.

Adjourned. H. Q. WHITE, Secretary.

SULLIVAN COUNTY

Sullivan County Medical Society met in Sullivan, January 5, with Pres. J. T. Oliphant in the chair.

Minutes of December meeting read and approved.

The secretary made a report of the financial condition of the society, and asked that a special assessment be levied to meet the expenses of the current year. In view of the deficit of last year and the 25 cents per year levy of the district society, it was voted that a special assessment of 50 cents be levied for the year.

The question of some form of protection for the physician who is called in to wait on a case of abortion was discussed and a statement to be signed by the patient and her husband was presented, but after some discussion it was thought best that the matter be left to the individual doctor and not be agitated with the laity.

Dr. Billman presented a paper on "Ergot." He discussed the history, description, constitution and various preparations of ergot. The therapeutic possibilities of ergot are due to its action on the unstriated muscle fiber; its action is chiefly on (1) the organs of circulation, and (2) the remaining hollow viscera. It acts chiefly on the arterioles and smaller arteries, and increases blood pressure. By reason of its contracting blood vessels it is of use in hemorrhages of the various mucous membranes, apoplexy, shock, postoperative shock and vomiting, alcoholism, morphinism, meningitis, aneurysm, incontinence of urine and postpartum hemorrhages.

Dr. Maple reported the results in ninety-four cases in which he had administered pituitrin. He discussed the source of pituitary extract and its physiologic action. It increases blood pressure, checks puerperal hemorrhage, and stimulates and crystallizes uterine contractions in labor. Action due to contraction of unstriated muscle fiber. Series of cases favorable. Has been able to reduce time of labor. Has been able to avoid use of forceps during the four years that he has used it. Believes in small doses of 0.5 c.c. or less to avoid danger to perineum. It is of great value in just minor cases, or where there are weak, irregular or slow pains. Should as a rule not use until dilatation is well along and head engaged, but can in select cases be used where head is not engaged and pains not concentrated enough to produce results. Of much service in cases where the head is not engaged and is lying to one side of brim of pelvis by greatly aiding in changing to, and holding in, the proper presentation. Splendid in eclampsia coming on in labor. Three such cases delivered in thirty minutes or less without forceps. Had collapse in one case with alarming symptoms for a period of fifteen minutes. Have not had any bad results in the child. A few cases do not react to the first dose, but a second will usually bring results. Have only had postpartum hemorrhage in one case, a ii para and second child delivered with pituitrin, uterus very inert and boggy. Indicated where prolapse of cord or any other cause demands quick action. Of benefit in delivering the after-coming head. Have used in one case of temporary paralysis of the bowels with results in a very short time.

Both the above papers generally discussed, after which the society adjourned to social session and were entertained by the local men.

Members present: Drs. Scott, Briggs, VanCleave, Oliphant, O'Dell, Billman, Neff, Higbee, Thompson and Maple.

TIPPECANOE COUNTY

Tippecanoe County Medical Society met in regular session, January 11, in the banquet room of the Hotel Lahr. After partaking of an excellent dinner, a discussion of clinical cases was held.

The paper of the evening was by the newly elected president, Dr. Frank S. Crockett, which gave in sub-

stance the present state of the society and suggested some of the things which might be done to stimulate interest.

Dr. C. J. Brockway, Lafayette, was voted to membership.

The next meeting will be held January 25 in the council chamber of the courthouse. This will be a joint meeting with the Lafayette Dental Association. The meeting will be addressed by Dr. A. R. Ross on "The Teeth and Adjacent Tissues as Sources of Systemic Infection."

Adjourned.

E. VAN REED, Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

CALCIUM PHENOLSULPHONATE, P. W. R.—A nonproprietary brand of calcium phenolsulphonate admitted to New and Nonofficial Remedies. Powers-Weightman-Rosengarten Co., Philadelphia.

IRON LACTATE, MERCK.—A nonproprietary brand of ferrous lactate admitted to New and Nonofficial Remedies. Merck & Co., New York.

SODIUM PHOSPHATE, MONOBASIC, MERCK.—A nonproprietary brand of sodium acid phosphate admitted to New and Nonofficial Remedies. Merck & Co., New York.

PHLORIDZIN, MERCK.—A nonproprietary brand of phloridzin admitted to New and Nonofficial Remedies. Merck & Co., New York.

SULPHANILIC ACID, MERCK.—A nonproprietary brand of sulphanilic acid admitted to New and Nonofficial Remedies. Merck & Co., New York.

ERGOTIN, MERCK.—A nonproprietary brand of extract of ergot, purified, admitted to New and Nonofficial Remedies. Merck & Co., New York.

ANTITHYROIDIN-MOEBIUS TABLETS, $\frac{3}{4}$ GRAIN.—Each tablet contains antithyroidin-Moebius $\frac{1}{4}$ gr. Merck & Co., New York.

EUQUININE TABLETS, 2 GRAINS.—Each tablet contains equinine 2 grains. Merck & Co., New York.

EUQUININE TABLETS, 5 GRAINS.—Each tablet contains equinine 5 grains. Merck & Co., New York.

FERRATIN TABLETS, $7\frac{1}{2}$ GRAINS.—Each tablet contains ferratin $7\frac{1}{2}$ grains. Merck & Co., New York.

STYPTICIN HYPODERMIC TABLETS, $\frac{3}{4}$ GRAIN.—Each tablet contains stypticin $\frac{3}{4}$ grain. Merck & Co., New York.

STYPTICIN SUGAR-COATED TABLETS, $\frac{3}{4}$ GRAIN.—Each tablet contains stypticin $\frac{3}{4}$ grain. Merck & Co., New York.

STYPTICIN DENTAL TABLETS, $\frac{3}{4}$ GRAIN.—Each tablet contains stypticin $\frac{3}{4}$ grain. Merck & Co., New York (*Jour. A. M. A.*, Jan. 1, 1916, p. 31).

DIONIN TABLETS, $\frac{1}{4}$ GRAIN.—Each tablet contains dionin $\frac{1}{4}$ grain. Merck & Co., New York.

DIONIN TABLETS, 1 GRAIN.—Each tablet contains dionin 1 grain. Merck & Co., New York.

THEOPHYLLIN SODIUM ACETATE TABLETS, 0.15 GM.—Each tablet contains theophyllin sodium acetate 0.15 Gm. Merck & Co., New York.

TRIPHENIN TABLETS, 5 GRAINS.—Each tablet contains triphenin 5 grains. Merck & Co., New York.

TUBES TROPACOCAINE HYDROCHLORIDE, STERILIZED, 1 GRAIN.—Each tube contains tropacocaine hydrochloride, 1 grain. Merck & Co., New York.

VERONAL-SODIUM TABLETS, 5 GRAINS.—Each tablet contains veronal-sodium 5 grains. Merck & Co., New York.

IODIPIN TABLETS, 3 MINIMS.—Each tablet contains iodipin 3 minims. Merck & Co., New York.

APIOL, MERCK.—A nonproprietary brand complying with the standards for apiol. Merck & Co., New York.

CREOSOTE CARBONATE, MERCK.—A nonproprietary brand complying with the standards for creosote carbonate. Merck & Co., New York.

PHENOLPHTHALEIN, MERCK.—A nonproprietary brand complying with the standards for phenolphthalein. Merck & Co., New York.

QUININE TANNATE, MERCK.—A nonproprietary brand complying with the standards for quinine tannate. Merck & Co., New York.

SODIUM NUCLEINATE, MERCK.—A nonproprietary brand complying with the standards for sodium nucleate. Merck & Co., New York (*Jour. A. M. A.*, Jan. 8, 1916, p. 117).

SWAN'S TYPHOID BACTERIN (No. 44) (PROPHYLACTIC).—Marketed in packages (hospital) of thirty-six vials and in packages (board of health) of seventy-two vials. Swan-Myers Co., Indianapolis, Ind. (*Jour. A. M. A.*, Jan. 15, 1916, p. 191).

RADIO-REM, OUTFIT No. 5.—An apparatus designed for the production of radioactive drinking water by the action of radium sulphate contained in terra cotta plates. It consists of two plates contained in 250 c.c. bottles; when the bottles are filled with water the two plates impart about 3.6 microcurie (10,000 Mache units) to 500 c.c. water daily. For action, uses and dosage refer to the article on radium in New and Nonofficial Remedies. Schieffelin & Co., New York (*Jour. A. M. A.*, Jan. 15, 1916, p. 191).

DIPHTHERIA IMMUNITY TEST (SCHICK TEST).—This test is intended to determine those persons who have not in their blood an amount of diphtheria antitoxin sufficient to render them immune to diphtheria. The test is of special value for use in institutions and among groups of persons exposed to diphtheria, in order that it may be determined which individuals should be given an immunizing dose of diphtheria anti-toxin. It is also of value in the diagnosis of other conditions simulating diphtheric infections.

DIPHTHERIA TOXIN STANDARDIZED (SCHICK TEST).—Marketed in sealed capillary tubes each containing a solution of one-fiftieth of a minimal lethal dose for guinea pigs of diphtheria toxin. H. K. Mulford Co., Philadelphia (*Jour. A. M. A.*, Jan. 15, 1916, p. 191).

DIMAZON.—Diacetylaminoazotoluene. An orange-colored powder, insoluble in water but soluble in alcohol, chloroform, oils, fats and petrolatum. It does not stain the hands or cloth. It is said to be useful to promote the growth of epithelium in the treatment of burns, wounds, chronic ulcers, etc. Dimazon is marketed as follows:

DIMAZON OIL.—Two per cent.

DIMAZON OINTMENT.—Two per cent.

DIMAZON POWDER.—Five per cent. Heilkraft Medical Co., Boston, Mass. (*Jour. A. M. A.*, Jan. 22, 1916, p. 275).

ICHTHALBIN TABLETS, 5 GRAINS.—Each tablet contains ichthalbin 5 grains. Merck & Co., New York.

TRIFERRIN TABLETS, 5 GRAINS.—Each tablet contains triferrin 5 grains. Merck & Co., New York.

BETANAPHTHOL BENZOATE, ROCHE.—A nonproprietary brand complying with the standards for betanaphthol benzoate. Hoffmann-LaRoche Chemical Works, New York.

BETAIN HYDROCHLORIDE, ROCHE.—A nonproprietary brand complying with the standards for betain hydrochloride. Hoffmann-LaRoche Chemical Works, New York (*Jour. A. M. A.*, Jan. 22, 1916, p. 275).

ERGOTININE CITRATE, ROCHE.—A nonproprietary brand complying with the standards for ergotinine citrate. Hoffmann-LaRoche Chemical Works, New York.

HOMATROPINE HYDROCHLORIDE, ROCHE.—A nonproprietary brand complying with the standards for homatropine hydrochloride. Hoffmann-LaRoche Chemical Works, New York.

SEIDEN PEPTONE, ROCHE (SILK PEPTONE).—A nonproprietary brand complying with the standards for silk peptone. Hoffmann-LaRoche Chemical Works, New York.

THEOBROMINE AND SODIUM ACETATE, ROCHE.—A nonproprietary brand complying with the standards for theobromine sodium acetate. Hoffmann-LaRoche Chemical Works, New York (*Jour. A. M. A.*, Jan. 29, 1916, p. 355).

PROPAGANDA FOR REFORM

PROTONUCLEIN AND PROTONUCLEIN BETA.—Eight years ago, the Council on Pharmacy and Chemistry published a painstaking and exhaustive report on Protonuclein and other products of Reed & Carnrick. This report showed conclusively that the whole theory of nuclein therapy was a tissue of speculation, into whose texture are woven only a few slender threads of fact. Now the Council reaffirms its former action with regard to Protonuclein. The objections to Protonuclein apply with equal force to Protonuclein Beta, said to be Protonuclein mixed with equal amounts of nucleoplasm and protoplasm of the spleen. In view of the lack of evidence the claims made for Protonuclein Beta were unwarranted. The Council, therefore, reports that it is ineligible for New and Nonofficial Remedies (*Jour. A. M. A.*, Jan. 1, 1916, p. 38 and 48).

THE COMPOSITION OF LIQUID PETROLATUM.—As naphthene hydrocarbons predominate in Russian crude petroleum and paraffin hydrocarbons in many or most American crude petroleum, it was assumed that the petrolatums derived from these sources differed from each other in like manner. While both the naphthenes and paraffins are chemically inert, some unexplained therapeutic superiority has been asserted to reside in Russian liquid petrolatum. Benjamin T. Brooks, of the Mellon Institute, explains that most so-called "mineral oils" used for therapeutic purposes contain no paraffin hydrocarbons whatever and that, regardless of the source of the crude petroleum, the fraction which constitutes the liquid petrolatum is composed essentially of naphthenes and polynaphthenes (*Jour. A. M. A.*, Jan. 1, 1916, p. 38).

STUART'S CALCIUM WAFER COMPOUND.—The A. M. A. Chemical Laboratory reports that Stuart's Calcium Wafer Compound, consists essentially of calcium sulphide and aloes or aloin. Like other so-called blood purifiers, it is essentially a cathartic (*Jour. A. M. A.*, Jan. 1, 1916, p. 51).

HYDROPSIN.—According to the Ernst Bischoff Co., Inc., Hydropsin is the juice of digitalis, squill, European birch, juniper and knot weed, dialyzed and physiologically standardized. The Council on Pharmacy and Chemistry reports that the composition claimed for Hydropsin brands it as an irrational mixture in which potent drugs are combined with, and more or less covered up by, others that are obsolete and inefficient. The name, instead of indicating its composition, suggests diseases in which it may be thoughtlessly and indiscriminately used. The claim that the danger of toxic or cumulative action has been removed, if accepted by physicians, tends to uncritical use with possible disastrous results (*Jour. A. M. A.*, Jan. 8, 1916, p. 135).

DIGITALYSATUM.—Digitalysatum, according to the Ernst Bischoff Co., Inc., is the dialyzed juice of fresh digitalis physiologically standardized and containing 12 per cent. alcohol. Sterisol-Digitalysatum appears to be the dialysate without alcohol diluted with equal parts of physiologic salt solution. The preparations are advertised with claims which imply superiority to all other digitalis preparations. The Council on Pharmacy and Chemistry holds that attempts to create the impression that Digitalysatum possesses all the virtues of digitalis without its chief disadvantage are to be condemned as likely to lead to incautious use of the preparation. The Council therefore declared Digitalysatum ineligible for New and Nonofficial Remedies (*Jour. A. M. A.*, Jan. 8, 1916, p. 135).

SO-CALLED SECRETIN PREPARATIONS.—At the request of the Council on Pharmacy and Chemistry Prof. A. J. Carlson of the University of Chicago has studied the action of secretin when administered by mouth or directly into the intestine and also investigated the secretin content of certain alleged secretin preparations. Carlson and his co-workers, like all previous investigators, found that secretin, when given by mouth or introduced even in enormous doses directly into the intestine, is entirely inactive. Further, they were unable to demonstrate the presence of secretin in samples of Secretogen and another supposed secretin preparation (Duodenin) bought on the open market, except that one bottle was found which contained a little secretin. Carlson and his co-workers conclude that there is as yet no reliable evidence that lack of secretin is a primary or important factor in any disease and that, should this be established, secretin therapy, to be effective, must be intravenous. The Council endorsed the work of Professor Carlson (*Jour. A. M. A.*, Jan. 15, 1916, p. 178 and 208).

TIGER-BONE THERAPY AND "CLINICAL EXPERIENCE."—In China the administration of powdered tiger-bone is, or was, a favorite form of treatment of supposed cardiac weakness. Since many patients have recovered after taking tiger-bone and no one has proved that they might not have died had they failed to take it, "clinical experience" stands back of the treatment. Not satisfied with the assertion of the dealers regarding the genuineness of the drug the conscientious Chinese physicians subject the tiger-bone to a kind of physiologic standardization. He offers the bone to a dog. If it is an ox-bone—a frequent form of substitution—the dog will seize and eagerly gnaw it, whereas, according to the teachings of Chinese pharmacognosy, if it is a tiger-bone the dog will depart hurriedly with his tail between his legs. Much of our so-called clinical experience is not much better than that of the Chinese "clinical" evidence for tiger-bone therapy. Also, many physicians are wont to accept the statement of drug dealers without even making an attempt to check the claimed identity of the advertised remedy (*Jour. A. M. A.*, Jan. 15, 1916, p. 197).

MIXED ANTITYPHOID AND ANTIPARATYPHOID INOCULATION.—The use of any mixed vaccine is to be looked on askance. The simultaneous inoculation against typhoid, paratyphoid A and paratyphoid B needs further study in many directions. Reason and judgment at present would seem to approve the idea of using a mixed vaccine for the typhoid and paratyphoid infections. If a practical method of using this mixed vaccine can be devised, it seems to promise results (*Jour. A. M. A.*, Jan. 15, 1916, p. 193).

FULTON'S COMPOUNDS.—A "Bulletin" sent out by the promoters of Fulton's Renal Compound and Fulton's Diabetic Compound gives an account of the alleged good results of the treatment in the case of a Mr. J. J. Pennepacker. The columns of a local newspaper announce the amputation of this man's leg for diabetes (*Jour. A. M. A.*, Jan. 29, 1916, p. 373).

STRONTIUM BROMIDE.—The official bromide contains about two thirds as much bromide as is contained in potassium bromide and about three-fifths as much as that contained in sodium bromide. Hence it may be expected that the bromide action from strontium bromide will be much less than that of either potassium bromide or sodium bromide (*Jour. A. M. A.*, Jan. 29, 1916, p. 376).

STRONTIUM SALICYLATE NOT SUPERIOR TO SODIUM SALICYLATE.—In a series of carefully controlled trials, carried out in the Lakeside Hospital, Cleveland, M. A. Blankenhorn shows that strontium salicylate possesses no advantages over sodium salicylate as regards either therapeutic efficiency or freedom from undesirable by-effects. The salicyl content of strontium salicylate is about four-fifths that of sodium salicylate. This smaller salicylate content may have contributed to the notion that strontium salicylate is less likely to cause salicylism. This notion may have also arisen from the fact that the more expensive preparations are likely to be given in smaller doses than the cheaper sodium salicylate. That the strontium salt of salicylic acid has no advantages over the sodium salt, has also been pointed out in the report of the Council on Pharmacy and Chemistry on Rheumalgine (*Jour. A. M. A.*, Jan. 29, 1916, pp. 331 and 362).

BOOK REVIEWS

SPEAKING OF OPERATIONS. By Irving S. Cobb. Board cover, 64 pages, price 50 cents. New York, George H. Doran Company.

This is a humorous description of what the doctors did to Mr. Cobb and what Mr. Cobb thought of the doctors while they were doing it. He dedicates the book to two classes—those who already have been operated and those who have not yet been operated on. It is amusing, and neither doctor nor patient will find anything objectionable in it.

NITRO BY HYPO. A Pep-tonized Tonic for the Physician. By Edwin P. Haworth, Superintendent of the Willows Maternity Sanitarium. The Willows Magazine Company, Kansas City.

This is not a scientific treatise, but a compilation of short uplift articles that have appeared from time to time in the *Willows Magazine*. The articles discuss in a philosophical and sometimes in an analytical way the things which make for the success, prosperity and happiness of the medical man. Some good helpful advice may be obtained, especially in those chapters relating to the habits of life.

LABORATORY METHODS. With Especial Reference to the Needs of the General Practitioner. By B. G. R. Williams, M.D., and E. G. C. Williams, M.D., Formerly Pathologist of Northern Michigan Hospital for the Insane, Traverse City, Mich. With an Introduction by Victor C. Vaughan, M.D., LL.D., Professor of Hygiene and Physiological Chemistry and Dean of the Department of Medicine and Surgery, University of Michigan, Ann Arbor, Mich. Third Edition, illustrated with 43 engravings. Price, \$2.50. St. Louis, C. V. Mosby Company, 1915.

This book has gone through two previous editions and has already received favorable editorial comment in *THE JOURNAL*. In this book the subject of laboratory methods is presented to the general physician in such a way that he can very easily understand it, and if he were to follow the very simple procedures described by the authors he could make many laboratory examinations himself. One cannot help recommending such a work very highly.

MODERN BIOLOGIC THERAPEUSIS. A Concise and Practical Treatise on Biologic Products for the Use of Practitioners in the Modern Application of Immunology to Therapeutics. Illustrated. Price, \$1. New York, Medical Department of the Lederle Antitoxin Laboratories, 1915.

There is hardly a physician nowadays who does not use some of the biologic preparations when they are indicated. If the physician does not know or understand what there is to be known concerning these biologic substances he can get all the knowledge he needs from this little volume which embraces a complete description of all the biologic products used in medicine prepared by this well-known laboratory. It is a neat, well-planned book and one that should be of much service to the general practitioner.

NERVOUS AND MENTAL DISEASES. Volume X of the Practical Medicine Series for 1915. Edited by Hugh T. Patrick, M.D., Professor of Neurology in the Chicago Polyclinic, Clinical Professor of Nervous Diseases in Northwestern University Medical School; and Peter Bassoe, M.D., Assistant Professor of Nervous and Mental Diseases, Rush Medical College. The Year Book Publishers, Chicago.

Probably no branch of medicine is neglected by the general physician so much as that of nervous and mental diseases, and yet it is, indeed, a branch that every one of them ought to follow up to the best of his ability. One of the best ways to keep in touch with what is being done from year to year is to follow up these reviews which embrace quite fully the important developments in this field of clinical medicine.

SKIN AND VENEREAL DISEASES. Volume IX of the Practical Medicine Series for 1915. Edited by Oliver S. Ormsby, M.D., Professor and Head of the Department of Skin and Venereal Diseases, Rush Medical College, with the Collaboration of James Herbert Mitchell, M.D., Research Fellow in Pathology, Rush Medical College. MISCELLANEOUS TOPICS. Edited by Harold M. Moyer, M.D. The Year Book Publishers, Chicago.

This volume strikes one as being on the whole rather technical, and one that may not appeal strongly to the general physician. The subjects of dermatology and venereal diseases are covered in the usual able manner, and this will no doubt make the volume of some value to the specialists.

DISEASES OF THE SKIN. By Henry H. Hazen, A.B., M.D., Professor of Dermatology in the Medical Department of Georgetown University; Professor of Dermatology in the Medical Department of Howard University; Sometime Assistant in Dermatology in the Johns Hopkins University; Member of the American Dermatological Association. Two hundred and thirty-three illustrations, including four color plates. St. Louis, C. V. Mosby Company, 1915.

We agree heartily with the author in his statement that there is at present no book on diseases of the skin that is altogether suitable for either the student or general practitioner. The smaller books do not contain enough to make them of value, and the larger works contain so much that the inexperienced or average man is lost in the wealth of material it contains.

With this work the author has attempted to fill the popular demand for a book that should present the subject of dermatology to the average man in a

satisfactory way. He has been especially liberal with his illustrations, all of which are of a high grade of excellence. The value of these illustrations as a help in teaching dermatology cannot be overestimated.

We feel that attention ought to be called to the failure of the author to mention the pioneer work of one of our own Hoosier physicians, Dr. L. T. Rawles, in establishing the relation of the *Pediculoides ventricosus* to "grain-itch."

This book ought to and no doubt will enjoy a wide popularity.

AMERICAN ILLUSTRATED MEDICAL DICTIONARY (DORLAND). A new and complete dictionary of terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, Veterinary Science, Nursing, Biology, and kindred branches; with new and elaborate tables. Eighth revised edition. Edited by W. A. Newman Dorland, M.D. Large octavo of 1135 pages, with 331 illustrations, 119 in colors. Containing over 1,500 more terms than the previous edition. Philadelphia and London: W. B. Saunders Company, 1915. Flexible leather, \$4.50 net; thumb index, \$5 net.

Eight editions of this handy medical dictionary have been required to meet the demand, and the recommendation is well deserved. This last edition has been carefully revised throughout, and, as stated by the publishers, the revision has been so thorough it has been necessary to make entirely new plates for it. The author has succeeded admirably in his effort to produce an up-to-date medical dictionary sufficiently varied for the many requirements of all classes of medical men. The book does not claim to be an encyclopedia—it is a dictionary and a concise and convenient word book aiming to furnish full definitions of the terms of medicine and kindred branches, and such collateral information as medical men generally would be apt to look for. The book is of convenient size, with the flexible cover is easily handled, and the clear type and good paper will be appreciated.

POSTMORTEM EXAMINATIONS. By William S. Wadsworth, M.D., Coroner's Physician of Philadelphia. Octavo volume of 598 pages, with 304 original illustrations. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$6 net; Half Morocco, \$7.50 net.

This is a most interesting volume, and one that deserves careful reading by the real student of medicine. The author has assumed, and very justly, that the ordinary postmortem examination is meaningless. Some of the interpretations of the postmortem table as repeatedly published in textbooks are misleading and should be revised in view of results that are obtained through greater skill and more highly trained reasoning powers of the operator. The author has brought together some of the results of his observation, thinking, and reading, associated with the study of more than 4,000 postmortems. He has aimed to present matters not adequately discussed; as also he presents in their true light matters about which errors are commonly accepted. The work covers in a very thorough and comprehensive way the general subject of postmortem examinations, how they should be made and how they should be interpreted. The illustrations have been specially prepared to show the points discussed in the text. To the student the book will be of value in training his mind in accurate methods of observation and in the analysis of things that are seen.

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BONE-GRAFT SURGERY. By Fred H. Albee, M.D., F.A.C.S., Professor of Orthopedic Surgery at the New York Post-Graduate Medical School and the University of Vermont. Octavo volume of 417 pages, with 332 illustrations, three of them in colors. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$6 net; Half Morocco, \$7.50 net.

The implantation of autogenous bone grafts is gaining in favor, and accordingly the medical profession should welcome a volume that presents the technic of the application of the bone graft in the widening field for its use. This volume presents the author's original applied technic with ample illustrations and he considers the subject as a surgical specialty. He calls attention to the value of roentgenography as an aid to bone surgery, and he especially recommends electrically driven tools to augment the skill and accuracy of the surgeon in arresting bone diseases and restoring bone defects. The illustrations are especially noteworthy and form a valuable addition to the work. The book should find a ready and wide sale among all surgeons and those who are interested in repair of bone deficiencies and bone fixation.

A TREATISE ON THE PRINCIPLES AND PRACTICE OF MEDICINE. By Arthur R. Edwards, M.D., Professor of the Principles and Practice of Medicine and Clinical Medicine, and Dean of the Northwestern University Medical School, Chicago. New (third) edition, thoroughly revised. Octavo, 1022 pages, with 80 engravings and 23 full-page plates in colors and monochrome. Cloth, \$6 net. Lea & Febiger, Philadelphia and New York, 1916.

A careful examination of this new third edition convinces us that Dr. Edwards has rewritten practically the entire book in order to bring it up to present-day standards of excellence. In fact, the additions and modifications are so radical as to make this third edition a new work, and one that is fully in keeping with Dr. Edwards' reputation as an experienced physician, notable teacher and capable clinician. The author evidently has spared no effort in making his work cover the real advances in modern practice, and it has been done in such a way as to insure brevity and clearness in a subject that because of its broadness requires broad discussion. An unusual amount of space has been devoted to treatment and to a detailed consideration of drugs and their uses. The physiologic action of drugs has been dwelt on carefully because, in the author's experience, the symptoms of disease may be confounded with those of the remedies exhibited in its cure. Also the differential diagnosis of diseases likely to be confused are considered in tables which serve a useful purpose as a ready reference. Inasmuch as the borderlines of medicine and surgery overlap, the author has included, where deemed necessary, the surgical indications and results. Concerning the many additions that have been made we can do no better than quote the author who in his preface says that there are practically new chapters on icteric anemia, the ductless glands, Roentgen-ray findings, erythremia, sepsis (infection, toxemia, bacteriemias), high calory feeding in typhoid with a table of food values, sporotrichosis, blastomycosis, trichinosis, hookworm disease, pellagra, gas poisoning, the arrhythmias and other cardiac neuroses, tropical splenomegaly and various other tropical affections. Due consideration has been given to the meningitis serum of Flexner and Jobling, Strong's work on

amebic dysentery, Brill's disease, anaphylaxis, paratyphoid, blood cultures in typhoid and other bacteriemias, the "carriers of infection," the recent epidemics of meningitis and poliomyelitis, vaccines, serotherapy, the spirochete as the cause of syphilis and the recent status of tuberculin in its diagnostic and therapeutic application. The diagnostics and therapeutics of cardiac failure, hypertension, diabetes, gastric and duodenal ulcer, constipation, drug addictions, neuralgias, etc., have been elaborated fully. New plates are introduced, illustrating the diphtheria bacillus and its cultural appearance, the *Spirochetæ pallida* and refringens, and Roentgen-ray plates in gastric subjects. The chapters on tuberculosis and syphilis are designedly amplified, as these diseases touch every organ, enter every specialty, and attain as great sociologic as medical importance; indeed, an understanding of these maladies is almost an understanding of medicine. The Wassermann and luetin tests, congenital lues, and new matter on mercury and salvarsan are treated with much detail, because of their colossal importance. Attention has been given to numerous criticisms and many minor alterations have been made in the interest of logic, clarity and conciseness. We have no hesitation in recommending this as a thorough as well as practical treatise on modern medicine. It unquestionably takes leading rank and should prove admirably suited to both students and practitioners.

SURGICAL OPERATIONS WITH LOCAL ANESTHESIA. Second edition. By Arthur E. Hertzler, A.M., M.D., Ph.D., F.A.C.S., Surgeon to the Halsted Hospital, Kansas City, Mo.; Swedish Hospital, Kansas City, Mo.; General Hospital, Kansas City, Mo. 327 pages; 173 illustrations; cloth bound. Price, \$3. Surgery Publishing Company, New York.

This is an eminently practical work and should meet with the approval of a very large number of surgeons as well as general practitioners. It does not cover the ground as comprehensively as some of the larger works on local anesthesia, but in this respect it may be considered to be more efficient because much superfluous matter has been omitted. The author has very wisely chosen to discuss the subject from the standpoint of personal experience, and, as he very aptly says in his preface, he stands sponsor for the technic presented and firmly believes that satisfactory results will be accomplished if directions are followed. The greatest difficulty in meeting with success from local anesthesia in general surgical operations has been due to faulty technic in preparing the field of operation. The author calls attention to this matter, and attempts to make the subject clear through detailed description of the various steps necessary in order to carry out a technic that in his hands has proved successful. All of the more important major operations are discussed, and the illustrations, practically all of which are original, go a long way toward elucidating the text. Special emphasis has been laid on the necessity for gentleness in technic in order to avoid any unnecessary strain on the sensibilities of the patient, and due attention has been given to the subject of drugs employed and the manner in which they are to be used. In many instances that author has outlined the entire course of the operation. This is of unquestioned value to the less experienced operator who may attempt local anesthesia in major operative work.

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NEXT ANNUAL SESSION, FORT WAYNE, SEPT. 27, 28 AND 29, 1916.

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The demand for a new edition of a work in so highly developed a field of medical literature is both a commendation and a summons to improvement. The author has spared no effort in complying. The real advances throughout this enormous and active domain have been incorporated, and the whole work has moreover been virtually rewritten to secure increased brevity and clearness.

Particular attention has been given to therapeutic details in accordance with the importance of logical treatment; numerous new preparations, and modified names and dosages, particularly for children, are explicitly specified. Due consideration has been given to anaphylaxis, paratyphoid, blood cultures in typhoid and other bacteriemias, the "carriers of infection," vaccines, serotherapy, the spirochete as the cause of syphilis and the recent status of tuberculin in its diagnostic and therapeutic application. New plates are introduced, illustrating the diphtheria bacillus and its cultural appearance, the *Spirochetæ pallida* and refringens, and x-ray plates in gastric subjects.—From the Preface.

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ORIGINAL ARTICLES

DIAGNOSTIC ROUTINE IN GENERAL PRACTICE *

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Diagnosis is an art; it is the highest expression of art in medicine. The material it employs is experience.

Interpretation, deduction and action may be said to constitute experience. Diagnostics appeal to the individual mind only in so far as the individual mind is able to interpret the experience there embedded.

Every man cannot be a Lane, a Kocher, a Kovacs, or a Mayo. They are masters. Equally great with short-circuiting a colon or removing a goiter, is the giving of detailed attention to the individual case, manifesting an openness to conviction, appropriating the work of the genius. The difference in physicians is largely a difference of methods. It is assumed for the purposes of this paper there is necessity of three things:

1. That we apply the principles of philosophy in dealing with disease.

2. That we possess a substantial working knowledge, the text presenting a skeleton outline idea of a few of the more important phases of diagnosis, rendering it imperative that,

3. We adopt routine measures of investigation.

A great collection of expensive instruments of diagnostic precision is not necessary; the reliability and the usefulness of commonplace means of securing diagnostic data render necessary only the addition of the personal element to do good work.

The diagnosis of disease rests upon three things: clinical history, physical signs, pathological knowledge.

The pathologist can afford to be absolutely sure; the clinician must interpret in the light of clinical history; therefore, the developing of a chain of circumstantial evidence is equally important with what we find on physical examination.

To throw open the doors of the mind and allow all disease to enter into consideration each time we see a patient is foolish and impossible in the performance. Each case should lead us to arrange before the mind's eye a selected group of reasonably probable causes for the symptoms complained of and for the signs discovered. What we select should depend upon the clues furnished us by the patient himself, or by the results of our own examination.

Beginning with the chief complaint we work out the various phases entering into the cause, the evolution, and the probable outcome.

A case usually presents a symptom in the foreground, but it may in itself be very misleading. It is from this point we must inquire into the remote and obscure causes. We should adopt routine measures of investigation that help us on the way in reasoning out a hypothesis in a case of disease; test by physical and chemical means the soundness of ideas we may have as to an individual case; learn to think constructively; visualize the material with which we work.

Just as the busy lark is the messenger of day, and an east wind presages the coming of rain, so there are a myriad of tell-tale signs which speed the knowledge of the observing diagnostician as to the state of health. Unhappily things true and evident are not of necessity recognized. If you see clubbed fingers and have learned to interpret them, you know at once the victim has either a congenital heart disorder, or a fibroid lung. A frog-face, sky-

* Read before the Indiana State Medical Association at Indianapolis, September 24, 1915.

scraper gaping of the mouth, protruding teeth, and a near-imbecile look does not necessarily presage stupidity, but it does spell adenoids and tonsils that should have been removed in infancy. A narrow, flat, or pigeon-breast chest also points to those ubiquitous, iniquitous abominations of the mouth.

The German observers¹ tell us that in a male patient with few hairs on the chest, and a horizontal line of hairs across the pubis, in patients with a double-pointed ensiform cartilage, or a secondary mammary gland, that these signs shall be taken into consideration as meaning that such a person more readily takes on degenerative processes. When we encounter bloody pleural fluid² at first tapping in a case that is not absolutely acute, it is always very strongly suggestive of cancer or sarcoma.

What does a headache mean? Or "stomach" trouble? Certainly more than a cue to prescribe in the one case an analgesic, or in the other magnesium hydroxid. The patient can procure these of the corner druggist without the formality of consulting a physician. A heart murmur does not constitute heart disease; nor does absence of albumin in the urine exclude nephritis. Low-grade infections are not always "malaria," any more than slightly more exaggerated ones are always *threatened* "typhoid." Toxemic, infectious or inflammatory processes, with an expression chiefly psychic in character need not necessarily be hysteria or neurasthenia; behind the presenting symptom may be adhesions along the intestinal tract, bladder pressure, or something of minor local importance, but by the time it reaches the brain causes a volcanic eruption. Headache as a presenting symptom may have its origin in brain disease, from toxemic conditions or may be functional. Masseurs account for flatfoot headaches, and induration headaches, and in their treatment of them give relief. Induration headaches due to changes at tendon insertions, mostly at the occiput, are very often due to tonsil disease. Formerly nearly all headaches were thought to be due to eyestrain, and the oculist was the first thought. We have come to realize the importance systemic conditions play in connection with a symptom-complex in which eyestrain is only one manifestation.

It is our duty to refer cases to the oculist accompanied by complete physical data. Has the patient with headache an intestinal stasis? Is there evidence of toxemia from some other

source, such as pyorrhea, tonsillar disease or a methemaglobinemia from excessive use of acetanilid. Anemia, while associated with conditions responsible for headache, is not known to be the direct cause of headache.³

Is there increased vascular tension without urinary findings due to a beginning sclerosis; is there night headache, or morning headache, a low gravity urine, and high blood pressure, evidences of chronic nephritis; is there albumin and an acute nephritis?

There may be a neurasthenic headache, in which the patient has established a pain habit. Forenoon headaches, and especially headaches at night while suggestive of nephritis, may be due to syphilis or brain tumor. Every headache calls for an investigation of the urine, the blood pressure, and the blood.

A normal hemoglobin percentage for practical purposes renders unnecessary further analysis so far as the blood is concerned, although it is better to examine the fresh specimen of blood also, since there may be intervals between low hemoglobin. When the percentage is reduced there is at once present an anemia. The question, then, is it primary anemia? And if so, is it chlorosis, formerly a common disease, but now rather rare, and which is diagnosed by exclusion.

The other type of primary anemia, namely, pernicious anemia, is characterized by huge red cells, which overstay, and are often nucleated, are of irregular shape and size, and show stippling. A blood count shows a high-color index, in which the number of cells is reduced out of proportion to the reduction of hemoglobin, because each cell contains an overamount of hemoglobin owing to its large size. With this goes the clinical picture of pernicious anemia, which occurs at the sclerotic age: weakness, dyspnea, numbness, lemon-yellow color of the face, diarrhea recurrent in type which resists all treatment. There are symptoms on the part of the cord in 33 per cent. of the cases.

Secondary anemia shows the opposite picture under the microscope from the pernicious type; achromia, which is poor staining quality, because of low hemoglobin content; therefore there is a low color-index, the cells being reduced in number but a reduction of hemoglobin out of all proportion. Secondary anemia occurs from intestinal parasites, malaria, tuberculosis, dysentery, cirrhosis of the liver, chronic nephritis, cancer, lead poisoning, and in diseases in which hemorrhage occurs, such as gas-

1. Bauer: Neusser Clinic.

2. French, Herbert: *Index Differential Diagnosis*, p. 118; also Cabot, R. C.: *Phys. Diag.*, 5th Ed., p. 330.

3. Cabot, R. C.: *Notes Summer Course M. G. Hosp.*

tric ulcer, bleeding piles, uterine hemorrhage, and in diseases attended with toxemia, from infection and suppuration. Thus there may be gallbladder disease, appendicitis, mastoid and sinus disease and diseased tonsils.

What people term stomach trouble is very vague and indefinite. It may mean much or little; it usually does not mean disease of the stomach. Many stomach disturbances are but expressions of some remote pathology. Gastric symptoms may come from almost any organ in the body. It is claimed by at least one competent observer⁴ that there are but two diseases of the stomach, namely, ulcer and cancer.

If a person of middle age who otherwise has no history of stomach trouble suddenly develops it, the chances are it is malignant in character. The cancer age is also the arteriosclerotic age and therefore the time of nephritis and uremia. The cancer age is also gallstone age, and the age for angina pectoris.

Gastric analysis is of value in determining the emptying power of the stomach but we can very well eliminate it as a routine measure. If HCl is absent it is confirmatory of cancer, but it is absent in other conditions and in normal people.

Early diagnosis of cancer is difficult; there are no reliable signs. Gastric cancer will show blood in the stools with the guaiac test in 90 per cent. of the cases, being careful to exclude meat from the diet on account of the hemoglobin it contains which vitiates the results of the test, and that there are no piles. In gastric cancer where the diagnosis is established, and the question of operative interference a debatable one, the Germans advise against operation when the urine shows the reaction for urobilin and urobilinogen with the Ehrlich aldehyd powder, which, in the absence of cirrhosis means that secondary involvement of the liver has already taken place.

Ulcer is the commonest disease of the stomach, occurs most frequently about the age of 40, in men, and shows hemorrhage in but 25 per cent. of the cases. To differentiate between gastric and duodenal ulcer is a difficult matter. The symptoms of gastric ulcer are those of hyperchlorhydria and it is difficult to determine when hyperchlorhydria is or is not associated with ulcer.

The hunger pain occurring two or three hours after meals, commonly present, is often removed by taking food, or an alkali. Gastric analysis may show in ulcer an excess of acid, normal acidity, or no acid at all. Later symptoms of gastric ulcer are those of stasis, such

as vomiting of large quantities of food at one time taken twenty-four hours before; the symptoms lose their characteristic groupings and become indistinguishable from those of cancer. Bauer of Vienna and others, attach importance to the presence of the Oppler-Boas bacillus in pyloric stenosis from malignant disease; the absence of the Oppler-Boas bacillus, and the presence of sarcinae, muscle and starch cells, evidence benign stenosis; also sharp whisky taken causes pain immediately in stomach ulcer, but later if duodenal ulcer.

Surgery has shown that formerly where gastric ulcer was diagnosed on account of vomiting, pain on taking food, and gastric symptoms, the condition frequently is one of anemia, especially in anemic young women; that these patients when put to bed after thirty-six hours' rest, bear a full diet of meat and vegetables well, in anemia with gastric symptoms, whereas in ulcer with previous severe symptoms, such a full diet is not well borne, bringing a return of the symptoms.

In the Neusser clinic⁵ it is found within two or three days after an attack from gallbladder disease, a needle stroke over the liver, front or back, brings out goose-flesh, whereas this phenomenon does not occur in connection with gastric ulcer.

Roentgen ray in the diagnosis of gastric lesions is an aid to which we are glad to have recourse, but it is not in all instances absolutely to be relied on. Quoting the words of Dr. George C. Johnston, Pittsburgh, "The reliability of the results obtained by Roentgen investigations depends entirely upon the skill of the investigator and his diagnostic ability in general plus his experience in interpreting the Roentgen findings. There are a number of men in the United States who possess almost uncanny skill in the diagnosis of ulcer and early cancer. There are but few of these men, however, and they possess diagnostic ability aside from their skill as roentgenologists. Personally in our own laboratory, we do not know of any mistakes of omission or commission in the diagnosis of gastric or duodenal ulcer, and some of the cases of carcinoma of the stomach have been so early that inspection of the pylorus at the time of operation failed to reveal any but the most trivial evidence of trouble, yet pylorotomy having been performed, the pathologic report has shown carcinoma. Our percentage in gallstones will not exceed 50 per cent. I believe practically 100 per cent. of kidney

4. Cabot, R. C.: Notes Summer Course M. G. H.

5. Bauer.

stones may be diagnosed successfully by the Roentgen ray."

The Roentgen ray often shows a surgical lesion even though it is impossible to determine whether its location is in the pylorus, the duodenum, or the gallbladder.⁶

The hope seems to be, then, in recognizing the importance of getting the patient into the hands of the roentgenologist, that the surgeon may remove the trouble early enough to prevent return. In a neurotic patient, especially a woman, who can belch to order make sure such a patient is not a windsucker. It is frequently found such a person is constantly gulping down air.

In vague and indefinite stomach disturbance it is very important to take the temperature, test the blood and examine the lungs for latent tuberculosis, which time and again first finds expression through the stomach. Abrupt appearance of dyspepsia in a person under 35 who has not changed his work, is not anemic, is not a nephritic, or is not weighed down with worry, should be suspected as being of tuberculous origin. Likewise nephritis frequently finds expression in the stomach, rendering necessary the investigation of the urine, and blood pressure. It is the vascular type of nephritis, that is, kidney arteriosclerosis chiefly associated with arteriosclerosis of the heart and brain, that most often causes indigestion.

No more frequent cause of distress in the stomach than gallbladder disease; the pain often occurs in the pit of the stomach, but pain in stomach trouble rarely occurs in the middle of the night, while that of gallstones does. Appendicitis should be thought of in the outset of inquiry into the cause of stomach disorder. The symptoms may be those of spasm of the pylorus and vomiting, and for this reason too often is diagnosed acute indigestion.

In the less fulminant type of appendix disease, the symptoms are frequently those of chronic stomach trouble, such as dyspeptic symptoms, or those of hyperchlorhydria, the constant stimulus from appendix disease causing reflex irritation in the stomach and a continuous pouring out of gastric juice. Piles and irritations around the anal opening, and adhesions along the intestinal tract may be the source of similar disturbance on the part of the stomach. Mild-grade peritonitis from pelvic inflammation associated with acute gastric symptoms of a violent character is frequently diagnosed ptomain poisoning, one of the most maligned and misused terms of the day.

The conditions most frequently encountered which bring about confusing symptoms on the part of the stomach are: Peptic ulcer, duodenal ulcer, gallbladder disease, appendicitis, tabes, colitis, syphilitic liver, malignant disease of the bowel, stone in kidney or ureter, angina pectoris, pancreatitis (rarely), lead poisoning, tuberculosis, nephritis.

Angina pectoris is a condition frequently interpreted in the light of a gastric disorder. Functional angina occurring in younger neurotic subjects is often associated with pain in the stomach and vomiting. Constipation is frequently found in connection with underlying conditions causing stomach manifestations. Morning sickness of pregnancy may simulate dyspepsia, especially that type of dyspepsia as seen in lead poisoning, uremia, alcoholism and tuberculosis. In all cases of dyspepsia, as in all cases of anemia, the lead line should be looked for on the teeth with a magnifying lens.

As a working rule, *in the absence of recent infection*, when an examination of the heart reveals only the presence of a murmur and an absence of all other signs, we must conclude it is functional. Functional murmurs are loudest at the base and are systolic in time. In the absence of recent infection, there must be present at least three things to differentiate organic disease from functional murmurs: 1. A murmur, 2. Accentuated pulmonic second sound, 3. Hypertrophy, as evidenced by displacement outward of apex impulse.

Mitral disease is primarily stenosis, and is *always accompanied by regurgitation*, even though a systolic murmur cannot be elicited.⁷ A thrill, localized, usually means disease of the heart. The size of the heart is determined by sweeping the finger down the front of the sternum to the enlargement which corresponds to the second rib, below which is the second space; the ventricular contraction is traced downward and outward as far as can be felt; this conforms pretty accurately to Roentgen-ray plates. Cardiac dulness proper extends three-fourths of an inch beyond the point of maximum impulse as seen in health. In children, especially in girls, up to 14 years, the apex impulse may be normally one-half inch external to and on a line with the nipple.

Mitral stenosis is a disease of young girls, 61 per cent. occurring in girls; it is often symptomless, latent, and almost never breaks down the heart. If it seems to it is because of septic reinfection, the result of a former streptococcus infection. If a patient, with mitral disease

6. Lange, Sidney: Roentgen-Ray Exam. Stomach, Ohio State Med. Jour., January, 1914.

7. Cabot.

gets by the 21st year, the prognosis for a long life with a crippled heart is good. Necropsies show that 10 per cent. of the cases of mitral stenosis results in death from embolism of the brain. Therefore hemiplegia is a very common occurrence in this disease. Mitral stenosis is the second most common cause of hemoptysis, (pulmonary infarct).

Mitral stenosis is almost always due to rheumatism; it may precede the joint symptoms. Rosenow has put the tonsil on the map as being a frequent portal of entry of infection, streptococcic in type; hence the terminology of the day, when it hits the joint instead of rheumatism, it is a streptococcosis of the joint; when it hits the inside of the heart, a streptococcosis of the endocardium; when it hits the brain causing chorea, a streptococcosis of the nervous system.

The diagnosis of mitral regurgitation rests on: Systolic murmur at apex, pulmonic second accentuated big heart.

The diagnosis of mitral stenosis rests on: Sharp first sound at apex, pulmonic second accentuated and doubled, presystolic murmur, presystolic thrill, localized, big heart.

In mitral stenosis the first sign is a slight tapping, or sharp slapping first sound at the apex impulse, which precedes the presystolic roll, and before there is a bruit or enlargement.

We should remember, normally, pulmonic second is louder in youth, pulmonic second and aortic second are equal in adult life, aortic second louder in advanced years.

Aortic disease is mostly syphilitic in origin and therefore occurs in later life. It is the result of syphilitic aortitis which causes a dilatation of the aorta, extending downward, affecting the aortic orifice by dilating it. In aortic disease, in the absence of a history of syphilis, a negative Wassermann, and with a history of rheumatism, the interpretation must be in the light of the clinical history, therefore a streptococcosis.

Syphilis does not attack the mitral valve, therefore when there is present a murmur at the mitral valve with a history of syphilis, we must again interpret in the light of the history, and call it a Flint's murmur, occurring as a presystolic murmur at the apex, in connection with aortic disease, but no mitral disease. Syphilis, however, causes a hypertrophy of the left ventricle and there is therefore an insufficiency of the mitral valve and for this reason a *systolic* at the apex.

The signs of aortic disease are: Big heart, murmurs, systolic and diastolic at the base, absence of aortic second, systolic thrill, Cor-

rigan pulse, when there is marked regurgitation, or Plateau pulse when stenosis is marked, capillary wave, although seen in normal people, Duroziez's sign (peripheral arterial systolic and diastolic murmur), high blood pressure, tortuous arteries.

Cabot's classification of heart diseases as to clinical types, which has its working advantages, is: Rheumatic, nephritic, arteriosclerotic, syphilitic.

The normal breath sounds are to be studied that we may detect the slight change in their quality and especially to know when this change occurs in the right lung, where normally there is a slight difference as compared with the left. Râles to be of diagnostic value must be constantly heard over a given area; even though they be few, if localized and persistent, mean as a rule tuberculosis. Râles are heard in either lung at the base in the lateral lines in normal people. The left lung according to at least one observer (Cabot), owing to the close proximity of the stomach, shows a normal difference at the base in that the breathing is increased in intensity, with no change in pitch. All inspiration and all expiration have three qualities, namely, pitch, duration and intensity. We must have something definite in mind to listen for in lung examination. Quality in breathing is difficult to interpret, and for this reason many cases of tuberculosis referred to sanatoria as incipient are well-advanced second-stage cases, according to physicians in these institutions. Incipient tuberculosis may show absolutely no discoverable physical sign; on the other hand, the very first sign may announce itself as a "hemorrhage, like a thunder-clap out of a clear sky."

When a patient has night sweats, a cough and bacilli in the sputum, there is no longer question, we know such a person has well-advanced tuberculosis. The idea is that we shall train ourselves to think in finer changes, and recognize early when the breath sound on inspiration shows a variation from the normal bronchovesicular breathing in being higher pitched, producing bronchovesicular breathing of the first type (BV 1), the earliest sign of incipient tuberculosis, which with certain history as tired feeling, muscular weakness and morning hoarseness, justifies a tentative diagnosis of incipient tuberculosis. When there is no change in the character of the breathing on inspiration, the expiratory note showing change of quality in two ways, higher pitch and greater intensity, it constitutes bronchovesicular breathing of the second type. Bronchial breathing is

a longer expiration with exaggeration in all three qualities, with a break between inspiration and expiration, and generally shows breaks in inspiration, termed cog-wheel breathing. Diminished breathing, dullness on percussion, increased bronchophony, fremitus, râles, modified borders of lung mobility, contracted apices, etc., should be looked for. It is said that if tuberculosis is recognizable in either apex, it exists in both. *No biologic reaction amounts to anything as a diagnostic aid in tuberculosis in the adult.*

The diagnosis of tuberculosis rests on: 1. Family history. 2. Patient's history. (a) pallor, (b) loss of weight, (c) loss of appetite, (d) dyspepsia, (e) fever, (f) sudden muscular weakness, (g) cough of a month or so duration, (h) occasional night sweats, (i) hoarseness unaccounted for, (j) shortness of breath. 3. Occupation. 4. Race (negro, Indian, Irish). 5. Age—17 to 35.

The tendency of the day is to simplify more and more, kidney pathology. It might be divided into glomerulo-tubular, tubulo-glomerular, and vascular, with the end-product in all three the same, namely, chronic interstitial. It takes nephritis probably about forty days to increase blood pressure. The diagnosis of chronic nephritis does not have to do with the presence of albumin, or tube casts. If these elements are present in a nephritis of long duration, it means that there has been engrafted on the old lesion, or that there still smoulders, an acute or subacute process. Tube casts mean there exists still more or less healthy kidney tissue; it may mean something as index of the present state of the cell, whether irritated or totally destroyed, but gives absolutely no clue as to the process behind that condition of the cell. *The most brilliant display of casts occurs in non-nephritic condition.*⁸ The diagnosis of chronic nephritis rests on increased blood pressure, headaches, night urine, increased twenty-four-hour urine and urine of low specific gravity.

Every physician has resting on him a three-fold duty: 1. To the patient. 2. To the profession of medicine. 3. To himself.

1. In addition to noting the pulse, temperature, reflexes, etc., each patient has a right to expect of us a routine which includes nothing less than: 1. Case history and case record. 2. Stripping to the skin, examination of chest and abdomen. 3. Urinalysis. 4. Blood pressure. 5. Hemoglobin percentage.

8. Emerson, Chas. P.: Cylindruria, Jour. A. M. A., Jan. 6, and 13, 1906.

It is not sufficient that we look for some definite pathologic lesion only when we suspect its presence. Hitherto the general practitioner has not overburdened himself with detail. It is a sad commentary on our methods when a patient of 50 years of age, time and again having had occasion to consult physicians, remarks that never has one been guilty of having made a physical examination. No more than eight, perhaps ten, out of a hundred physicians in Indiana make use of all the means of diagnosis at their command. More than 50 per cent. of the physicians rarely do more than ask a few questions and glance at the tongue.

2. Internal medicine is the most important of all the specialties; it asks at our hands a square deal. It asks that we remove it from competition with the cults and sects of the day, and place it above a trade on the basis of a science and an art. That we pass up bargain-counter goods and deliver in its name to the people goods with the stamp of scientific genuineness on them.

3. In the third place we shall profit by mistakes; verify ideas on facts; bring our diagnosis down into the arena where it can be assailed and questioned. We shall possess a working knowledge reinforced by a routine that places us beyond presenting symptoms; that develops within us a supremacy of attainment in the interpretation of disease; that opens up to us new avenues of thought, deduction and action, and brings us to the threshold of a new world of experience.

I acknowledge my deep obligation for privileges granted in the preparation of this paper to one of the great exponents of truth, one of the great personalities of American medicine, Dr. Richard C. Cabot.

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DISCUSSION

DR. WILLIAM R. DAVIDSON, Evansville: It is very easy to see, after hearing this paper, that the essayist has been under the teaching of Dr. Cabot, and any one who has been under Cabot's teaching goes back to his practice with an entirely new conception of what medicine means, of what accuracy means and of what logical deduction means. At the meeting of the House of Delegates the other night the question of the various cults was brought up. If it were not for the physicians themselves there would be no necessity for this organization to try to

suppress the various cults. The reason they have sprung into existence is because of the profession, because of the slipshod methods of the physicians themselves, to use a blunt term.

A number of points might be emphasized. I believe the first is the carelessness in the examination of patients. We must have systematic routine in all examinations, beginning with the head and in an orderly, systematic manner going through the entire physical findings, particularly taking a full clinical history and writing it down, and as time goes on you will be surprised how much more accurate your knowledge is becoming. I saw a case treated for malaria for five months, but when the man came into the office where a diagnosis could be made it was tuberculosis—but that was the first time he had been asked to remove his shirt for examination. In receiving the benefit of Dr. Cabot's work I was enabled to make a diagnosis of thirty-one cases of heart disease going over a limited time, and in one case of endocarditis the man had been told he was hopelessly afflicted with tuberculosis and had been recommended to go West though the physical signs did not point to the lung at all. There was an old lesion that had existed for forty years, but that was not the cause of his trouble; the cause was in the heart. In that particular line one undergoes a revolution when he studies under Cabot.

Too many doctors say they have not time to make examinations. From a rather extensive knowledge of physicians I believe that too many of them say that because they are not willing to take the time. I know a country doctor, in a little town, who has a splendidly equipped working laboratory and he uses it every day. He told me that he had gone on in the usual way for four or five years, eking out a sort of existence, and he decided that it was lack of method, so he completely equipped his office, turned out the loafers, drove himself away from the store where he had loafed, and had his specimens brought to him systematically and the time he had formerly spent with his feet on the table smoking and talking, he spent in his laboratory, and he is about as well equipped, mentally, for his work as any one I have seen. He takes time to go away, not every five or ten years, but at least once a year, and that man has made himself invaluable to his community. That is the reason why we have this persistent knocking, simply because we fail to deliver the goods. There is not a man in the state who mentally has not the ability, but too many do not equip themselves with working tools. Too many offices have nothing beyond two or three chairs, a table, and some old medical journals, some proprietary advertising—not a clinical instrument or test tube or any other means of making examinations.

A working knowledge of pathology is essential. As the essayist has well said, the little

presystolic thrill in a space not more than a half inch in diameter means that the dyspnea is not due to gas or because of indigestion, but to mitral stenosis. I made the remark some time before going to be with Cabot that I wondered we did not see more cases of mitral stenosis; but after being there a few days I wrote back that the reason we did not see them was because we did not know them; they are present. The average text has been misleading. We are looking for a symptom that sounds like a pipe organ. It is not there. Frequently a thrill is felt over a space no more than a half inch in diameter. We must first know the pathology and then how to interpret that with the clinical history. But when all is said and done the main thing is the clinical history of the patient.

DR. S. E. EARP, Indianapolis: The essayist has very nicely taken up the critical points of diagnosis that we ought to remember, and no doubt if we have not taken up this subject for a long period of time it unquestionably will refresh our memory, and I think it very timely. He takes up the etiology and pathology as well as the diagnosis, so that I consider a discussion may touch on any one of these.

Preliminary, however, to the main subject of his paper, in a very nice manner he censured the members of the medical profession for their dilatory methods of making examinations and too often arriving at an incorrect conclusion. Now, when we bear in mind that the average physician has in his office in his two hours probably eight patients, with fifteen minutes for each patient, which is a very short period of time—I wonder how many even take fifteen minutes for each patient, have him disrobe for the examination, make an examination possibly of the urine, or a physical examination of the chest—I wonder if any of us can correctly—I wonder if Dr. Kimberlin can examine any one's heart and take even four patients in two hours? But the average physician will have more than eight in the office. It is oftentimes a fact that the physician has twenty-five in his office during office hours—all are waited on, all receive their prescriptions, and many times the medicine is dispensed where a clerk is not hired.

If that is true, evidently this paper is timely in calling our attention to this. But is there a remedy? I do not want to take up all the time on the preliminary, but you remember when the report was made yesterday morning relative to the answers to questions that Dr. Wynn had sent out to the various gentlemen who are members of this society, it was asked: "How much do you collect?" One said 75 per cent., another 90 per cent. and one 100 per cent. and the one that collected 100 per cent. for his physical examination and putting up medicine, charged 40 cents. Now we can readily see there is a reason for superficial examination. If it is a

superficial examination and not paid for, it is perhaps all it is worth; but if the patient pays even 40 cents it is taking money from the patient for which he does not get value received, and he of course goes to some one else and blacks the eye of the man who treated him wrongfully. September 28, in the *Medical Record*, Dr. Ford took up 1,000 cases of tuberculosis in a sanatorium. It was found that where in these cases a diagnosis had been made of tuberculosis, at least 30 per cent. of the patients had never had the clothing removed, no thermometer had ever been used, and there had never been any urine examination made; in 3 per cent. there had never been any examination made and the patient had not been told that he or she had tuberculosis. That is in line with what our essayist has said. There ought to be a remedy some way, and I believe the time is coming when we must study cases carefully before we can make diagnoses. A snap diagnosis is wrong, and it is usually the death knell of the patient, for he goes to someone else who perhaps is adept in examination, but then it is too late.

Concerning the lung: I believe it was said a long time ago that where we had osteo-arthritis, or clubbed fingers, it was due to heart disease, and that the individual with clubbed fingers for a long period of time, if not during all life, had suffered from some disease that was responsible for it. We finally have gotten away from that, and I believe we do know now that in most cases of osteo-arthritis there has been an empyema. Furthermore, we have learned that in cases of empyema with clubbed fingers it does not necessarily mean a chronic state, for after drainage they get well. I believe that is something we have learned very recently indeed.

I want to call attention to cog-wheel breathing, that it was said meant a tubercular condition. We all should call to mind that cog-wheel breathing exists in the normal individual, and that a lazy chest or lung—and whatever backs it—is oftentimes responsible for cog-wheel breathing, and that we may have cog-wheel breathing in an individual who is in the very best of health, but simply got up fatigued.

I do agree most certainly that in the aortic diseases with regurgitation the cause is syphilis. We used to say 90 per cent., but I think now we can say that usually in aortic disease there is a history of syphilis. However, I would like to add to that the question of taking up alcoholism as a cause.

So far as infective diseases being responsible, so much has been said about pyorrhea, and I believe very often infective conditions come from the mouth.

I am glad the essayist mentioned aerophagy. There are some aerophagists who have wind on

the stomach and it is not due to disease, but to the fact that they are wind-swallowers.

Concerning the condition of the heart. Toxemia of the heart muscle oftentimes is responsible for functional disease of the heart, let us say the valve. I believe the same thing may be said of the myocardium, and particularly so many times where we have a functional murmur believing it to be an organic murmur. So far as the organic murmur is concerned the patient is safe as long as we can keep up the nutrition of the myocardium. Therefore it means methods which will protect the myocardium—safeguard the myocardium.

DR. A. C. KIMBERLIN, Indianapolis: I would like to say a word as to the objects of Dr. Bird's paper. The man engaged in general medicine has responsibility much greater than formerly, and has opportunities that he does not improve. That is an aspect of the paper.

The thing that commends his attitude most of all is, as you will notice, that he assumes that every man pursues a scientific course. In the next place he presupposes that every man is going to do what we are doing more and more each day, and that is, treat the patient frankly and openly. These are two things about this paper which are well worth while to any one engaged in the practice of general medicine. The position which the general medical man occupies today is almost an enviable one, and will become much more so if we were to improve our opportunities. It is just as dignified now—not so remunerative perhaps in dollars and cents—to be in general medicine as to be engaged in a specialty, the thing which heretofore has robbed our ranks of most of our talent, and I am sorry to say has been a vein of commercialism which still lingers that is sooner or later going to be stamped out from the minds of men who are really and thoroughly doctors.

Dr. Earp I know will allow me to correct his understanding of the report yesterday. The report showed that the man who collected most was the man who charged most. It was the cheap man who examined his patient for 40 cents who only collected a small percentage. The meaning of that is this: It is like your front office and back office. It is immaterial what is going on outside, if you take care of the inside. The rest will care for itself. If you render a patient good service, take plenty of time; he will not complain about your charge.

The whole thing sums itself up into this: Preparation, ability and frankness and openness with your associates in your work, and the money part will take care of itself.

Dr. Bird attempted to handle this subject quite broadly. One thing which impressed me in the onset of his paper is this, and it is such a common error with all of us, and that is to

quietly listen to sometimes a long, tedious history, one which is tempered with ignorance, one which is made purposely misleading. In this case you are nothing more than a judge taking evidence, but unfortunately medical men do not have the judicial mind, and to wait until all the evidence is in before rendering an opinion requires sometimes a great deal of courage, and it is the commonest error that a man will take a presenting symptom, which is proper at the time of the onset, and immediately form a conclusion. In other words, he makes a diagnosis long before he gets all the evidence quietly before him. This one thing I want to emphasize—get the facts from the patient first, which is your history, and then get what evidence you can from physical examination, before you prejudice yourself mentally, because there is where we make our errors most frequently—in following a line and keeping after it, even at the expense of putting aside something which another person sees in a different light. It is not a matter of what we do not know. We know enough. But it is simply a matter of what we do and how we use our knowledge.

That is the plea of Dr. Bird's paper, and the points I think we might all take home to our cases. They are equally applicable to every man engaged in general medicine.

DR. C. S. BOND, Richmond, Ind.: I think this is a very important paper, probably as much so as any paper we will have for the general practitioner. It certainly covers a great deal of ground. I think the writer covered more ground than he would otherwise, because he wanted to impress us with the importance of being more thorough.

Dr. Cabot does not claim much for himself when it comes to physical diagnosis—he says he fails sometimes in diagnosis; but he has made it possible for us to do better work.

I want to call your attention especially to this fact, that when you have made a diagnosis you should ask yourself if you have made a proper diagnosis, because very frequently you have not. It seems to me the attitude for a doctor to take is to be constantly on the lookout, to be constantly searching for the truth, not make a snap judgment, even after you have gone over the case thoroughly. Take another day for it; take two other days for it; or make it a week. In fact, I do not think a man can be a diagnostician of much importance unless he gives himself to training for that work. Every day he ought to look over a chest to see what he can find. Train his finger tips and his eyes as well as his ears. These things do not come to a man in a day; they must come by constant effort all the time. I believe the difference between men very largely is the difference in their ability to detect things by hearing, seeing and feeling. We get sort of a sixth sense after a while.

The man who is well equipped in his office may have the equipment, but does he know how to use it? Does he know when he has chemical reaction that it always means a certain thing? I believe that could not be answered in the affirmative. A man must have the equipment and the ability; he must go to Johns Hopkins or some other place and take the morning walk once in a while to see what is going on in the world and see how other men determine these things.

To examine a patient you do not have very much time, but you do have time for each patient, some time in the course of the examination, to go over him carefully. After you have gone over him carefully three or four times and know what you are talking about, at least to a degree, and then you do not have to give so much time to him after that, and consequently you can do a great deal of work during office hours, and efficiently, without giving any patient more than their time. But you must be quiet in your head and your heart, because this commercial proposition creeps into all of our work, and if a man is not quiet and equable in his heart he may make mistakes in that direction. He must have his head and his heart and all his faculties quiet to diagnose properly.

DR. W. A. FANKBONER, Marion: One thing I would like to emphasize, and that is in regard to the service we give. All this talk about the osteopaths and various other cults is, as one of the discussants has said, our fault; it is our fault, because we have not given service that satisfied the public. A certain percentage of patients will go wrong in their heads as to what they ought to do for themselves, no matter what we do, but a large percentage of this irregularity, a large percentage of the thing we are trying to suppress by appropriation of money and committee work, would disappear if the medical service given to the public was adequate.

Now, as to the time given to patients. It is appalling what is done in the practice of medicine. I am not sour, but it is appalling what carelessness there is in the practice of medicine—physical carelessness, not doing the work that ought to be done when the patient comes into your office. Think of running out four or five patients an hour! When a patient comes to you for the first time you should forget that you have anything else to do but look after that patient. That patient is all you have to do at that time and you ought not think of taking less than half an hour to an hour; an hour is little enough. If you can not do it one day, tell him so and have him come back. As has been aptly said, it is not a commercial proposition. We must make enough to support our families and leave a little something after we are dead, but if the service is rendered I am confident in my own mind that the commercial part will

take care of itself. Instead of getting 40 per cent. of what you do, you will get 90 or 95 per cent., and where is the business that has no greater loss than 5 per cent.?

As to the matter of handling patients, I think we are prone in recent years to lean on the test tube and microscope and blood count and different things of that kind. I would not detract from the value of these things, but what we want to learn primarily is to study this patient as a human machine and apply our educated senses to finding out what we think is the matter with him, and these laboratory methods should be used in a corroborative way rather than as a primary plan. We will run the risk of becoming mechanical in diagnosis if we rely too much on laboratory methods, forgetting that we have within ourselves the success we should attain—the faculty of interpreting things at their full value.

DR. CHAS. R. BIRD, closing: I will not take up any more time.

Virtue is its own reward, as has been stated. If we do good work the money part will take care of itself. We owe it to ourselves, if to nobody else, to do good work. We must live in keeping with our social standing, we must lay up something for the future, and have a surplus for post graduate work. Woodrow Wilson has written a little book, "When a Man Comes to Himself," and that is what we want to do—find ourselves. The younger generation is being trained in the very things we ought to be doing today, and if we are slipshod in our methods we will pay the penalty in the future, because the evils we are attempting to fight are simply the result of our own methods. Somebody has said there has been too much doctoring and too little "doctor." I think that expresses it in the essence. With the average doctor—and I belong to that class—the patient is in the same position toward that doctor when it comes to the interpretation of disease that the logic of a courtroom has in the presence of the average jury—it is absolutely foreign to the essence of what enters into the deductions in connection with the case. I thank you.

THE TREATMENT OF CEREBRO-SPINAL SYPHILIS BY INTRASPINOUS INJECTIONS OF MERCURIALIZED AUTO-SERUM

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In very briefly discussing this subject at the present time, and describing my own technic for the preparation and administration of this serum, it is not my intention to review the general subject of the intraspinal treatment

of cerebrospinal lues, or my own cases thus treated, some forty in number, including those previously reported.¹ The uncertainty as to the quantity of salvarsan or neosalvarsan contained in the serum obtained at variable intervals following their intravenous injection (the Swift-Ellis technic) led me to the use of intraspinal injections of serum containing an exact dose of mercury, as suggested by Byrnes.² Mercurialized serums, both human and equine, are available in the market. I have used these to a very limited extent, but for reasons which appeared to me sufficient I decided not to use either an alien or an homologous serum, when possible to procure and prepare the patient's own serum. These reasons in the order of their importance are:

1. The serum of a patient having a luetic infection probably contains specific antibodies the action of which should be beneficial.

2. An alien serum, and especially horse serum, might possibly produce anaphylaxis.

3. Either an alien or an homologous serum, if by any chance it might not be reliably sterilized by the fractional method might possibly transmit pathogenic micro-organisms.

In regard to the production of luetic antibodies in the blood practically nothing was definitely known until the work of Zinsser and Hopkins³ which seems to demonstrate clearly the formation of specific agglutinins as the result of the antigenic action of killed *Treponemata* injected experimentally into the blood of rabbits. The correctness of the opinion of Neisser and Bruck in 1911⁴ that "it is plain therefore that parasitidal antibodies do not occur in the course of syphilis" could only be accurately determined as they themselves said "when able to work with pure cultures of *Treponemata*." That their conclusions were wrong seems now to be demonstrated, for we must, I think, agree with Zinsser and Hopkins that, since the agglutinating effect is due to an antibody essentially the same as that which produces bactericidal, precipitating and opsonic effects, "the demonstration of agglutinins establishes the fact that in syphilis as in bacterial disease the host responds by the formation of antibodies, or sensitizers specific for the *Treponemata*." The bearing of these facts on the choice of serum for the intraspinal treat-

1. McCaskey, G. W.: The Autoserosalvarsan Treatment of Syphilis of the Central Nervous System, *Jour. Am. Med. Assn.*, Jan. 17, 1914, pp. 187-189.

2. Byrnes, C. M.: *Jour. Am. Med. Assn.*, Dec. 19, 1914.

3. Zinsser, Hans, and Hopkins, J. G.: Antibody Formation Against *Treponema Pallidum*-Agglutination, *Jour. Exper. Med.*, June, 1915, p. 576.

4. Neisser and Bruck: Quoted by Zinsser and Hopkins, *loc. cit.*

ment of syphilis is obvious. The serum of a patient suffering from syphilis may be assumed to contain these antibodies, and in accordance with the known laws governing these phenomena it may be further assumed that these antibodies will be increased by the introduction of a treponemicide such as salvarsan or mercury into the circulation. It is scarcely debatable that a serum containing luetic antibodies is more likely to be effective in the intraspinal treatment of cerebrospinal syphilis than one which does not contain them. It seems quite probable that the Swift-Ellis technic owes much of its success to these antibodies. Unless the blood is withdrawn very shortly after the intravenous injection of salvarsan or neosalvarsan, for example, in about twenty minutes as recommended by the writer⁵ it can not be demonstrated in the serum. I have found the Abelin reaction absent within an hour after the intravenous injection of 0.9 gm. of neosalvarsan. After twelve hours or more as advised by some clinicians there is probably no trace remaining.

On the other hand, if we are looking for an increase of antibodies resulting from the antigenic action of treponemata killed by the salvarsan even twelve hours is much too short a time. The optimum time of withdrawal of blood after its reception of a treponemicide, in order to strike the "high tide" of the antibody formation which can be fairly assumed to occur is difficult of determination. Dr. Hans Zinsser⁶ says that while but little is known he thinks probably four or five days would be about the proper time.

Possibly the second and third reasons above given for using the patient's own serum may not be very important. However, so far as anaphylaxis is concerned, there seems no doubt of the possibility of its occurrence following the intraspinal injection of an alien serum against which the patient has been sensitized. The observations of Flexner⁷ on this point seem conclusive. It seems to be a reasonable assumption, therefore, that a patient's serum is safer than any foreign serum. It may be that sterilization of sera can be implicitly trusted, but such a question is entirely absent when the patient's own serum is prepared with a perfect technic.

Aside from the inconvenience and technical difficulties in the preparation of the patient's

own serum, which are not great, I see no adequate reason for using any other. It is certain that the patient receives no foreign proteid, no foreign toxin, no new infection. The serum, taken at a time which will probably represent the most active phase of parasitocidal antibody formation, can be combined with an accurately measured dose of mercury, or if salvarsan preparations are employed, it can be taken a few minutes after their intravenous injection while still readily demonstrable (the antibody formation having been produced by previous medication), thus administering intraspinaly the maximum quantity of antibodies, and a perfectly tangible though somewhat uncertain dose of salvarsan or neosalvarsan—probably two or three milligrams.

As a result of these considerations, I have adopted the following method: The patient is placed on vigorous salvarsan or mercurial treatment, and after sufficient time for the biologic reactions above referred to, about four or five days, the serum is prepared by the following technic.

In the U tube of the apparatus described in my second paper on this subject⁸ is placed 30 c.c. of normal salt solution, made with freshly distilled water, in which is dissolved one twenty-fifth of a grain of bichlorid of mercury. The apparatus, with suitable tubes as there described, is placed in an autoclave or steam sterilizer, preferably the former, and thoroughly sterilized. The mercurial solution is then poured over into one arm of the tube, unless it has been kept there throughout the process, and the blood, about 60 c.c., drawn into the other arm. It is an advantage to have plenty of serum as the exact dosage of serum, its percentage dilution and the precise amount of bichlorid of mercury can be more easily adjusted and calculated. One can not use quite all of the serum in the apparatus. It is necessary to have a surplus and use a measured part of it. If we wish to use a 50 per cent, dilution of serum, with one fiftieth grain of bichlorid of mercury, we would simply pour over 30 c.c. of the supernatant serum, which has been allowed to separate over night, and 30 c.c. of this mixture would represent the required dose. Of course, any other combination of quantity of serum, its percentage dilution, and the dosage of mercuric chlorid can be easily made.

After pouring over the serum into the mercury solution it should be mixed as thoroughly as possible, and then allowed to stand several hours preferably over night in a cool place to

5. McCaskey, G. W.: The Autoserosalvarsan Treatment of Syphilis of the Central Nervous System, Second Paper, Jour. Am. Med. Assn., May 30, 1914, p. 1709.

6. Zinsser, Hans: Personal communication.

7. Flexner, Simon: Accidents Following the Subdural Injection of the Antimeningitis Serum, Jour. Am. Med. Assn., June 21, 1913.

8. McCaskey, G. W.: Jour. Am. Med. Assn., May 30, 1914, p. 1709.

permit a thorough combination of the mercury and proteid. It should then be "inactivated" according to the Swift-Ellis technic by heating to 56 C. for thirty minutes. This "inactivation," whatever it may do with "salvarsanized serum," will probably promote a more thorough chemical union of mercury and serum, and when it has cooled down to about 37 C. it is ready for use, and should be injected intraspinaly at about body temperature.

While it is not my intention to discuss the general subject of the intraspinal treatment of syphilis of the central nervous system at this time I might say in passing that after two years of experience I believe it to be a very valuable auxiliary to our usual methods. It is probably true that many cases of cerebrospinal syphilis can be treated very successfully by other methods. It may even be true that some cases will do as well on vigorous antiluetic treatment by the intravenous, intramuscular and oral methods; but it seems to me perfectly reasonable to suppose that the diffusion of treponemicidal antibodies and drugs in the cerebrospinal fluid is an additional weapon the use of which certainly is worth while, at least in selected cases. It seems quite probable that the permeability of the partition wall between the blood vascular apparatus on the one hand and the large lymph space partly surrounding and partly contained within the cerebrospinal axis on the other may vary in different cases. The discrepancies found by different observers would be thus explained. If the centripetal currents are either exclusively or mainly through the chorioid plexus, variability in its vascular condition, either congenital or acquired, might be fairly assumed.

So far as my own experience is concerned I am of course unable to say what the results would have been in the same cases without the intraspinal treatment; to what extent in other words the improvement was due to the latter and what to associated methods, to which must be assigned great importance in their influence on the infection of the central nervous system. On the whole, my conclusion is that in cases of the milder type I would first press intravenous, intramuscular and oral methods, and if along with clinical and serologic improvement, the spinal fluid showed diminution of pleocytosis, globulin excess, spinal fluid Wassermann and the specific Lange gold chlorid reaction, I would at least make the intraspinal treatment a subordinate and occasional measure. If, on the contrary, the symptoms were urgent and progressive I would use it freely without in any degree lessening the vigor of the other methods of treatment.

The objections to this method of treatment are not serious. The after pain is sometimes quite severe, and there is occasionally a febrile reaction of 102 F. or even a little more. While unpleasant they are not entitled to great weight in making our assault on so serious a thing as a treponemal infection of the central nervous system.

With the technic above advocated I have no hesitation in saying that in careful and competent hands an infection of the spinal canal with anything not already in the patient's blood is quite impossible. Accidental contamination of the serum cannot occur. The apparatus and its contents (the mercurial or simple salt solution, if the original Swift-Ellis technic is employed) having been sterilized, and sterile rubber gloves employed the only possible source of infection would be from germs contained in the skin because of ineffectual skin sterilization, and caught by the needles as they enter the vein or spinal canal. It was formerly said that the skin could not be completely sterilized, but if the work of Bovée⁹ is to be credited this is no longer true, as scrapings and sections of skin subjected to two applications of 3.5% tincture of iodine at certain intervals remained absolutely sterile. It would therefore seem that the danger from accidental infection can be entirely ignored. Its safety and efficiency must be decided upon other grounds.

With the apparatus and technic above described the preparation and intraspinal administration of the patient's own serum, modified according to the purposes and views of the clinician, can be accomplished with a minimum of effort and a maximum of safety. Neither the blood, the serum obtained from it, nor the medicaments contained in it, are exposed for an instant to any hazards of air contamination that may be incidental to a transfer of material by an open air method. It is true that the relative importance of bacterial infection from the air becomes smaller and smaller as the problems are better understood, but that such dangers really exist there can be no doubt. Tyndal's epochal demonstration of myriads of viable micro-organisms in the air is the accepted view of the scientific world today. That such widely disseminated organisms as streptococci may at any moment and at any place fall into an exposed open receptacle containing a culture medium and rapidly multiply under favorable conditions, there is, I believe, no reasonable doubt. It is much more likely to occur in some atmospheres than others—and perhaps in the atmosphere of laboratories most of all. The

9. Bovée: *Am. Jour. Obstet. Dis. Women and Children*, July, 1914, p. 12.

disregard of surgeons of air infection of operative fields, if justified as it probably is, is entirely foreign to the question. Here the germs fall on living tissue, bathed with vital fluids charged with bacterial antibodies, which rapidly destroy them. On the other hand serum *in vitro* is devitalized and an excellent culture medium.

With the apparatus and its auxiliaries properly constructed the procedure can be carried out more easily and in less time than with any open air method. The rubber stoppers will deteriorate and have to be frequently replaced. The modification of my apparatus suggested by Stahl¹⁰ I have not tried. Theoretically it would seem that the clotted blood might be difficult of removal through the narrow aperture. The elimination of the tubes passing up through the rubber stoppers either in or above the serum should be convenient, unless the loosening of a clamp on the rubber tubes below might lead to the loss of the serum—a thing which could scarcely occur with the original apparatus.

THE MODERN CONCEPTION OF ONE FORM OF NEPHRITIS *

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My plea this morning is for that large group of patients suffering from chronic nephritis, a disease which, judging from the results, would seem little amenable to treatment.

The conception of nephritis which has prevailed until within a very few years is that of a disease of the kidneys, due, when acute, to an acute infection; when chronic to a variety of chronic infections—tuberculosis, lues—or to a variety of hypothetical toxic agents usually described as endogenous, which disease when once well begun will almost certainly progress steadily to a fatal termination unless some other disease presents prior claim to the patient. To the popular mind albumin and casts in the urine and Bright's disease are synonymous. This disease once begun, its inevitable progress was believed to be determined by an automatic mechanism, a vicious circle, which nothing could check. Periods of improvement occurred, but they were deceptive. Certain organs were capable of some regeneration, but not the kidney.

Within the last few years this conception has gradually changed. Bright's disease is a term

used correctly only when applied to the small, white, contracted, gouty kidney. To extend to other forms of nephritis the prognosis of this form along with the name is an unwarranted generality. Of nephritis there are several pathological and clinical varieties and of each all grades. From the point of view of physiological pathology, however, these several varieties are not, I believe, so very different. It is my desire this morning to review that conception of their production now gaining in popularity which explains a fairly large per cent. of cases. How large this per cent. is we do not know, but recent researches would indicate that this group is by no means the smallest of the forms of chronic nephritis.

The kidneys are highly organized, fairly sensitive organs whose function, the elimination of toxic as well as waste substances in the blood, subjects them to the danger of injury. What the limits of normal renal function in each individual case are is difficult to determine, but we probably overstep them frequently. Too violent exercise, indiscretions in diet, exposure to cold, drugs, etc., temporarily can disturb our kidneys. The urine of many football players, of Marathon runners, et al, immediately after their violent exertion not infrequently resembles that of patients with acute hemorrhagic nephritis. Many of the recent recruits in armies present at first evidence of nephritis which continues until they have become accustomed to the unusual exertion. But these symptoms in nearly every case soon disappear. Wherein do these differ from cases of progressive nephritis? We still believe that the majority of the latter are due to acute infectious diseases such as scarlet fever, diphtheria, tonsillitis, etc., but we no longer believe that, once inaugurated, the disease progresses automatically, but rather that it will stop unless the infections repeat themselves time and again, each acute infection adding its injury, each resulting necrotic area in part at least to be replaced by scar tissue. The pathological lesion is due therefore not to one infection but to many; not to one trauma but to one hundred and one and more. The disease progresses because its cause continues. The process may be likened to a smoldering fire which frequently is stirred up to brighter flame, which burns on for years slowly consuming the kidney tissue. The origin of this series of infections may be a focus in the nose, throat, mouth, bowels, etc., and this focus removed the process in the kidney in many cases may cease.

10. Stahl: An Autoserosalvarsan Apparatus, Jour. Am. Med. Assn., April 17, 1915.

* Read before the Indiana State Medical Association at Indianapolis, September 23, 1915.

We still fear acute tonsillitis accompanied by sore throat and fever as a cause of nephritis, but we fear still more subacute tonsillitis without local pain or fever which for years may at times be the origin of a mild septicemia. We fear the painless infections around the roots of teeth; the nasal infections of years-long standing whose chief symptom is susceptibility to colds. We still fear scarlet fever, but more the streptococcus tonsillitis which accompanies and follows it. And we should fear more than we do the chronic streptococcus infection of the bowel wall, one of the logical results of chronic constipation.

One of the most important recent advances in clinical diagnosis is the improvement in methods of bacteriological examination of the blood, for now we often find very attenuated pathogenic organisms in the blood of persons with very few symptoms of any trouble and without fever, and we have reason to believe that this chronic septicemia may continue at intervals for years. One function of the kidneys certainly is to eliminate from the blood the toxic products of these pathogenic organisms and they presumably suffer from this chronic infection. During the past year I have been impressed by the number of positive results of the bacteriological examination of the blood in these cases.

Another advance is that of more accurate urine cultures, and the very careful work of Dick and Dick has shown that in every case of nephritis studied, chronic as well as acute, pathogenic organisms could be isolated from the urine, organisms which resemble those usually found in focal infections.

Still another advance of physiological pathology is the demonstration that the kidney is capable of some regeneration of its specific elements if only the injurious agent producing the lesion stops in its activity. We now understand why the acute nephritis of long-distance swimmers, of football players, of Marathon runners, clears up quite completely; why so often the nephritis complicating the diseases of childhood get well leaving only slightly scarred organs; why the very serious nephritis of pregnancy seldom continues to bother the patient. In these cases the injurious factor is temporary in the duration of its activity, while in the case of subacute tonsillitis, pyorrhea, sinusitis, chronic appendicitis, etc., the focal infection is longlived and so the kidney trouble is progressive. This leads us to the conclusion that a great many (how many we do not know)

of the cases of nephritis demand, at the beginning at least, the surgical treatment of the focal infection, and shows us why since regeneration is a slow process, the patient should be protected from exertion, error in diet, etc., for even months after the last symptom disappears and he feels as well as ever.

In the above remarks we have not discussed the theory that the symptoms which we group under the term "nephritis" are evidence of a chronic acid intoxication, for even were this true it would not necessarily disprove the above ideas, but add another cog in the mechanism which brings about the results we are discussing. There would be the same need of surgical treatment of the primary focus.

Of course this is not the whole story of nephritis, for the kidneys once injured a vicious circle is without doubt set up. In nephritis the whole metabolism of the body is affected as well as the purely eliminative functions of the kidneys and in this abnormal metabolism toxic bodies are produced which without doubt explain the symptoms usually referred to as uremia. The serious symptoms of nephritis and in many cases its fatal termination are not as truly due to the nephritis itself as they are to the general disorder of the body, the necrosis of the liver, the disturbed tissue metabolism which so affects the central nervous system that convulsions and death are the result.

In the diagnosis of nephritis, as in that of other diseases, the results of the urine examination must be interpreted by the history and physical examination of the patient. I feel that in no small degree the present chaos in our ideas of nephritis is the result of the separation of the laboratory examination of the urine and the physical examination of the patient. It is just as important that the physician should examine his patient's urine himself as that he should listen to his heart or, in an abdominal case, should palpate his abdomen. The urine findings can scarcely be understood except in the light of the entire examination. Blood cultures should be made much more frequently than they are and we should remember that a growth from the blood presupposes an abnormal kidney even though the urine appears normal, for it is well known that the cortex may be the seat of multiple necroses and yet the urine give no evidence of any trouble. Albumin and casts are valuable evidence of that acute element which obtains with greater or lesser intensity in practically all progressive kidney troubles, but in chronic cases both may be absent for months at a time in patients whose renal substance by

weight is about one-quarter of the normal. Evidently the more albumin and casts the more normal was the kidney prior to its present disturbance. The more seriously diseased the kidney has been from chronic nephritis, the less will be the amount of albumin and the fewer the casts in the urine. It is for this reason that the minute traces of albumin should be sought for with the greatest care, for they may be the evidence of severe conditions.

I may be pardoned if I call attention to a few common mistakes in testing the urine for albumin. First, the trace of albumin obtained by the heat acetic acid test may not appear until five or ten minutes after the urine has been boiled and acidified, then boiled again. If the observer discards the specimen as albumin-free because it is perfectly clear immediately after acidifying and boiling, he will miss many of the very faint traces. Second, the twenty-four hour specimen is the specimen which should not be examined for albumin and casts, for in the very severe cases even the albumin is apt to be present only in the evening specimen after a day of considerable physical exertion. If this specimen containing albumin and casts be diluted by the other and albumin-free voidings of the day, it will be quite impossible to find albumin in the mixed twenty-four hour specimen. In the doubtful cases therefore the specimen examined should be that voided in the late afternoon after the patient has taken some exercise, and it will be examined before chemical changes have resulted in changing the reaction of the urine and destroying the casts.

My reason for presenting this aspect of the subject is to urge you to examine the urine of your patients more carefully, especially those who are only "neurasthenic"; to have more blood cultures made even though the urine be normal, and if the patient's urine contains albumin, casts or both, to allow the laryngologist, the dentist and the surgeon to do all they can for your patient before you subject him to the medicinal and dietetic care of chronic nephritis.

DISCUSSION

DR. GEORGE F. BUTLER, *Kramer*: Dr. Emerson's paper deals with many interesting phases of this subject, but I will discuss only a few of the points brought out in the paper.

I do not quite understand what the doctor meant when he spoke of a nephritis being "severe." Did he mean that the disease was acute; that the patient was liable to die soon, or that it was chronic and incurable?

We know that there is more danger of sudden death in an acute nephritis than in chronic;

patients suffering from chronic interstitial nephritis may live in a fairly comfortable condition for years.

The arterial degeneration referred to, I believe is separate from kidney disease proper. Arteriosclerosis, high blood pressure, and hypertrophied heart are not necessarily signs of nephritis, although chronic nephritis may result from these vascular changes. The smallest blood vessels, particularly are affected in vascular disease, and the renal vessels are not exempt any more than any other vessels. The kidney is deprived of some of its blood supply on account of the thrombotic changes in the blood vessels, there is localized destruction of kidney parenchyma with all the signs characteristic of parenchymatous nephritis, and a chronic interstitial nephritis, is, after all, but a progressive, localized parenchymatous nephritis.

Another point. Dr. Emerson spoke of athletic work producing albumin in the urine. This to my mind confirms the "acid" cause of albuminuria and other signs and symptoms of nephritis. Those of you who are familiar with laborers in steel mills know how frequently men, especially those who make sheet iron, are afflicted with cramps and on examination the urine will be found scanty, full of albumin and casts. This is due to an abnormal production or accumulation of acid in the kidney resulting from excessive muscular activity. Anything which will increase the production or favor the accumulation of acid in the kidney may result in albuminuria or nephritis. Excessive athletic work, exposure to cold, anemia (pernicious, especially) leukemia, epileptic seizures, uncompensated heart disease, any condition which will lessen the aeration of the blood and interfere with the proper escape of carbonic acid from that fluid will increase the amount of acids, thus producing the conditions found in nephritis. The more acute the nephritis, the greater the amount of acid present.

There are other forms of vascular disease than those referred to, by the way, which may involve the kidney. I refer to the infections. The entire blood vessel is not involved; there are areas of healthy tissue, while other areas are affected by the deposits of pathogenic organisms. In these cases there may be involvement not only of the kidney, but of the joints, endocardium, and pericardium—the nephritis, arthritis, endocarditis or pericarditis all due to the same thing, and showing practically the same pathology.

I believe that a too narrow view of the nature of nephritis—regarding it as an affection limited to the kidneys—may be a source of difficulty in our proper understanding of the pathology of the disease and its great variety of forms. Recovery from chronic nephritis under any treatment is rare, but we should not forget that to prolong the life of our patients and render

them comfortable, are results worth striving for. 'Remember that each patient must be treated individually; that there is no dexterous legerdemain required; but a thorough understanding of the etiology and pathology, natural processes, clinical course, and perfect familiarity with the therapeutic measures employed, are necessary to insure success.

There is not, in fact, any treatment for chronic Bright's disease; there are successive treatments, and it is necessary that the physician, following step by step the progress of the disease, shall vary the choice of his remedial measures according to the circumstances supervening in the course of the affection. If certain measures have at times been attended with success, and at others with failure, it is because physicians have not been careful to determine at what period of the disease a certain line of treatment should be employed.

The earlier Bright's disease is recognized and the patient placed under intelligent treatment, the more favorable, of course, will be the prognosis.

DR. GEORGE W. McCASKEY, Fort Wayne: There are few subjects more interesting than that presented this morning. Before discussing two or three points in the etiology of chronic nephritis I would like to emphasize a couple of remarks made by Dr. Emerson. One is on the use of the term "Bright's disease." I would like to see it relegated to the domain of innocuous desuetude. It means so much or so little. In the minds of perhaps most physicians it would mean what Dr. Emerson says it means, but it might mean a disease from which recovery can be absolutely complete. Regeneration of the tubuli can be just as complete as of any other tissue, and these cases can get entirely well. I would at least like to see the term confined to a very small group. I would like to urge the use of the mercuric salt as preliminary tests for albumin preparations. They will coagulate any proteid in the urine instantly. Whenever they in the form of Tanret's or Spiegler's solution give a positive test we must go to work by other tests and find out whether it is serum albumin or something else.

Another point is the absurdity of making a diagnosis in the laboratory. Any laboratory man who will take a specimen of urine and a blood examination and make a diagnosis and give general advice through the family physician is exceeding his function. The patient himself is an essential part of the data upon which diagnosis and advice should be based, and therefore the patient must be present and used as the greater part of the data, the laboratory work being confirmatory.

A word regarding the causes of nephritis. There is no doubt whatever about the growing importance of the very large group of these

cases due to chronic infection. The more we search for such causes of nephritis the more frequently we will find them and the larger this group will become—not only streptococcus infection but also other chronic infections, especially those two that are most common—lues and tuberculosis. The kidneys respond to the irritation of all forms of toxins and we must remember that the kidneys suffer more than other organs, because these toxins are largely eliminated through the kidneys and are irritating some to one part of the renal tissue and some to another, and that they do produce chronic lesions.

My own notion is that our conception of the causes of nephritis, while it includes these and will include more and more of this type of cases as years go by, must be considerably broadened and must include certain metabolic toxins as well as those of infectious origin; it must also include certain degenerative tendencies, and processes at present not understood; and finally it must include various forms of arterial disease which involve the kidneys as well as other organs and produce renal pathological conditions. In these four groups, especially in the larger group that Dr. Emerson has brought to our attention, I think we must look for the essential causes of chronic nephritis.

DR. H. O. PANTZER, Indianapolis: The subject of the effect of the toxemias upon the glandular organs, the secretory and excretory organs, is one of burning importance in medicine today. The doctor's timely, lucid and forceful description is to my heart's delight. To me as a working theory it seems well to conceive of toxemia of the anesthetic, and of a pre or does not singly nor primarily, nor chiefly affect the kidneys; toxemia affects every glandular organ of the body. It is owing to the extent that we can definitely examine into the efficiency of the kidneys, as we cannot yet into the efficiency of the liver, the skin, the mucosa, the serosa, etc., that our attention at this time centers chiefly upon the findings in the kidneys. In fact, not only the kidneys, but the liver, the skin, the thyroid and the pituitary glands, the ovaries, in short, all secretory and excretory organs are affected by toxemia, more or less.

Those of us who are surgeons know the effect of placing extra stress upon the resisting powers of the patient by the shock of an operation, the toxemia as a blight to glandular structures. It postoperative infection. We have for a long time weighed the influence that the condition of the eliminating organs in the individual case have upon the ultimate result obtained by surgery. I wish here to mention a personal observation pertaining to the effects of toxemia upon the liver, which though it has been mentioned by me frequently in discussions on occasions like the present, I have not published formally in a paper, nor indeed have seen it

mentioned in literature. I refer to a shrinkage in the size of the liver, easily demonstrated clinically by the lessened area of liver dulness. Concomitant with this goes a very light yellow stool, like a baby's stool, clearly indicating a faulty hepatic function. Under remedies which effect relief of the toxemia, the stools return to normal color and the liver to normal size. It is evident this diminution in size of liver has nothing in common with so-called sclerosis of the liver. I am aware that there are made in recent time laboratory and experimental research into the chemistry and physiology of the function of the liver and duodenum in disease, which promise soon to supply us with the measures and criteria of adjudging the disturbed functions of these organs as we already possess of the kidneys.

Turning more particularly to the effects of toxemia upon the kidneys, I wish to emphasize the significance that a low specific gravity has, even when not associated with the presence of albumin or casts. The latter are found acutely added to the former in most of these cases at times of acute toxemia or psychical excitement. Even at best they are found off and on in such cases where close and frequent observations are made. I have found in my operative work that a low specific gravity of urine as evidenced in the mixed specimen of twenty-four hours collection, is as distinctly menacing as are albumin and casts. There are cases brought to the surgeon which have obtrusive tumors, but which by the side of a specific gravity of the urine of about 1005 are simply inoperable. These cases when operated without thorough preliminary eliminative treatment, result in the unexpected fatalities reported after simple operations.

Concurrent with such changes in the function of the kidneys and liver, go depreciation of such important functions as of the skin, the thyroid, the adrenals, etc. The point I wish to make is that all glandular function is influenced by toxemia, only different organs are affected differently in degree in different individuals. We have all reason to go beyond the urinary test; we must learn to be circumspect and include all organs in our critical survey.

It is marvelous to what extent regeneration is possible in all of these organs. But persistent effort on the part of the patient and physician are required, as nowhere more. These patients are laggards and must be coached, as coaching is done in a game of football. These patients require the reverse of Edison's demand for sleep. Instead of six hours of sleep and eighteen hours of activity, it should be eighteen hours of rest and sleep and six hours of activity. It is surprising to what extent a competent search will find toxemia prevalent. I am reminded of the report of a business firm in New

York upon the medical examination of all its employees. One hundred per cent. of them were found to be ill. While at their tasks in the office, they were yet appreciably minus physically and as a consequence they were below par in their efficiency, as shown, anywhere from five to fifty per cent. I dare say, even in this august audience, the same finding might be verified.

DR. CHARLES P. EMERSON, closing: Please allow me to express my gratitude to my friends for the very kind way in which they have discussed my paper. When I threw my paper down and spoke extemporaneously I realized that many points would be omitted, but I cannot read a paper, I have to talk; and for that reason the discussants were at a disadvantage as so many points and links in the argument were omitted. I thank them for calling my attention to several things thus neglected.

The term "severe nephritis" was used to designate the severity of the renal lesions. A very severe renal lesion may exist in a patient who feels scarcely ill, although he has but a fraction of cortex left. On the other hand, a severe, even fatal acute nephritis is a disease not alone of the kidney but of many other organs, especially of the liver and nervous system. A few years ago it was my privilege to report a long series of cases of chronic nephritis. I was astonished at the little evidence the urine examinations alone gave of the lesions found at necropsy.

I wish I could believe in the acidity theory. I have tried hard; but when our friends the physical chemists showed us that in cases in which we would suspect an acid condition there is actually an increased alkalinity, I feel that we must wait for further evidence before accepting it. The evidence now accumulating all emphasizes the importance of chronic infection in the production of chronic nephritis. The importance of tuberculosis, lues, and malaria, as Dr. McCaskey and Dr. MacDonald have said, has long been understood, but that large group of cases not associated with these conditions has been the subject of much speculation. Now, however, the positive blood cultures and positive urine cultures—the number increasing in proportion to the number of times we search and the skill with which we make our search—would suggest strongly that these cases also are of infectious origin.

Dr. Pantzer made an important point in regard to low specific gravity of the urine. I, too, would rather trust the comparison of the specific gravity of the morning and evening urine, provided the patient has not drunk any water during the night, than a demonstration of a trace of albumin or casts. But of course the physical examination of the patient is of more importance.

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EDITORIALS

AUTOSEROTHERAPY

No real explanation can be offered for the use of autogenous serum as a therapeutic agent. We have not yet learned enough about the chemistry or the function of human serum to know when and how it should be used or not used. Autogenous serum therapy is, therefore, as yet in the experimental stage. The experimental application of this form of treatment has been going on for several years and already has yielded empirical results that are noteworthy.

One of the earliest therapeutic uses of autogenous serum was in the treatment of various skin diseases. At first the enthusiasm over the possibility of bringing about remarkable cures, especially in chronic persistent diseases such as psoriasis, eczema, etc., was very great and seemed to be quite general. Pemphigus, urticaria, acne, the various erythemas and other types of dermatoses were believed to be influenced by autogenous serum in a very striking favorable way. In fact, the serum came to be regarded as the most effective agent in the treatment of those diseases. Recently most—if not all—of this optimistic enthusiasm has disappeared. Not only that, it really seems to have been displaced by a more or less general wave of skepticism. The idea in vogue at present is that autoserotherapy in certain forms of skin disease is a commendable procedure and ought to be tried, but no brilliant cures should be expected. It may do a great deal of good in some cases, but absolutely none at all in others.

On the other hand, uniformly good results have followed the therapeutic use of autogenous serum in cases of effusion into the serous cavities. In those cases in which the effusion is due to malignant disease no benefit can be expected and no benefit results. In cases in which the effusion is due to circulatory con-

gestion serotherapy would be futile without the proper measures for relieving the embarrassed circulation. Obviously it must be only in the tuberculous type of serous effusion that autoserotherapy may be carried out with the idea of causing some improvement if not a real cure.

The spontaneous absorption of the effusion in many cases of this kind following the subcutaneous injection of a very small amount of the fluid seems to be quite striking. It is conceivable that this fluid stimulates the formation of or activates enzymes or ferments whose function it is to help break down the effusion so that it becomes more readily absorbable. No matter what the real explanation may be, the fact remains that in many such cases the effusion is rapidly absorbed and definite improvement in the general clinical condition seems to follow.

In abdominal effusion or ascites due to the nonsyphilitic types of cirrhosis of the liver, autoserotherapy may perhaps also be of some value. In such cases the physical and mechanical conditions are such that practically nothing should be expected. However, if there really is a possibility of developing by this procedure an enzyme or enzymes that may help to change the fluid and facilitate its absorption in cases of this type this method of treatment ought to be given a thorough trial.

In syphilitic disease of the central nervous system autogenous serum containing the specific curative drugs, that is, salvarsan, neosalvarsan, or mercury is being injected subdurally with results that are, on the whole, very encouraging. The serum can be charged with the curative drug either in vivo or in vitro. It is believed that the blood serum besides containing the specific drug influences the pathologic process by virtue of some of its own inherent unknown elements, for the intradural administration of autogenous serum alone in some cases has yielded favorable results. Be that as it may, intraspinal autoserotherapy in one form or another already has been established on an absolutely safe and rational basis, and in the hands of many different workers has yielded in some types of neurosyphilis remarkable clinical improvement.

It is possible that autogenous serum may be of service in other forms of disease as well. In the absence of more exact knowledge than we have now one may only conjecture or one may investigate in a scientific spirit along various

lines. When judiciously used autoserotherapy can do no harm. It should be remembered, however, that the danger of anaphylaxis is a real one. The individual can become sensitized to his own serum, a process that may be called "autosensitization." Evidently after the blood leaves its natural channels and comes into contact with foreign matter it undergoes some sort of invisible change — molecular, perhaps — whereby it becomes a different sort of protein from that circulating within the vascular system, so that when it is reinjected it may act like any other foreign protein. Care and intelligence are, therefore, indispensable in carrying out this form of treatment.

"PATENT MEDICINES"

The Indiana State Board of Health, through the Drug Laboratory, has just issued the fourth edition of their circular concerning Medical Frauds. It is much more extensive than the third edition, and each nostrum included is commented on in words that are understood by the laity. While nothing radically different from the old story of these concoctions has been discovered, a great deal of additional evidence of their worthlessness is presented in a most interesting manner.

The warning against the continued use of cathartics, that is included in the comments of those preparations which contain them, is timely and good. Advertisements that constantly remind the reader to drink a glass of water containing sodium phosphate before breakfast, or advise him to depend on the "master medicine" that contains a large dose of senna for relief from his "stomach trouble" are insidious and baneful. The proper education of the laity in this regard is to be commended.

The unusual mixtures, or rather the common drugs that are sold for unusual uses, are curious. Ferrous sulphate has been found to be advertised for stomach trouble when taken in solution, and for the removal of cancer when locally applied. Boric acid would reduce the weight if the blatant claims of the manufacturer were not lies, and milk sugar would abolish the desire for alcohol. The latter claim is especially vicious because it usually separates money from the poor and ignorant and its exposure should be widespread.

Women will be particularly interested and financially benefited by the circular's exposure

of fake toilet preparations. Surely they will no longer believe those suggestive and convincing notices that appear in the Sunday paper over the names of famous actresses and "beauty specialists" when they learn the composition of the mixtures offered. With the secrecy removed they will at once realize that Epsom salts are not worth \$4 a pound as a wrinkle remover and only 10 cents as a cathartic. Neither will they contribute \$8 for a pound of stearic acid to be used as a "complexion beautifier" when two candles are sold for 5 cents.

In fact, the circular is filled with information that will do much to promote public health by decreasing the use of "patent medicines," and will prevent imposition in the form of outrageous prices for simple and well-known drugs. The State Board of Health by this circular further proves its right to the American Medical Association's score of "10," the highest possible, in "patent-medicine" activity.

MEDICAL FEES AND THE WORKMAN'S COMPENSATION ACT

WHAT chance has the workman to get a fair deal when injured if he is compelled to accept any kind of medical and surgical services offered by an insurance company that returns its medical attendants because of price rather than competency? How long will it be before employees rebel against such unfair treatment, and how long will it be before the employers of labor also will object to having their employees subjected to the mercenary whims of greedy and conscienceless insurance companies? If all reports are true, the Indiana Workmen's Compensation Act is a valuable thing for insurance companies, but a bad thing for every one else; and seemingly the insurance companies have the support of the Industrial Board which is supposed to settle differences. However, there is one way by which the competent and conscientious physicians of the state can, in the end, bring about a change for the better, and that is through refusal to accept the niggardly fees offered by insurance companies for services in cases that come under the Workmen's Compensation Act.

Already many of the better class of physicians have refused to take care of such cases unless employers guarantee that the customary fees prevailing in the locality where the injury occurs will be paid for the services rendered.

The difficulties that medical men are experiencing at the present time do not arise through any objection on the part of employees or employers to the payment of customary and therefore fair fees for medical and surgical services rendered, but to the action of insurance companies that are ever ready to dictate terms that are prejudicial to the interests of every one but themselves, and seemingly the insurance companies have the approval of the Industrial Board in any action taken. The present condition of affairs is one not conducive to very great respect for the Workmen's Compensation Act which has been heralded as such a boon to workmen, and reputed to be so eminently fair to all those who are affected by the act. The medical profession certainly is being imposed on as a direct result of the act, and it is to be hoped that the lesson will have its effect in showing the necessity for organization in effecting such radical changes in either the act itself, or the interpretation of that portion of it which has to do with the regulation of medical fees. Medical men desire and are asking for only what is fair and just, and they object to the fixing of medical fees by the insurance company which has no other interest in the matter than to secure as much as possible at the least expenditure of money.

At
bring.

DISPENSING NARCOTICS

Considerable controversy has arisen concerning the right of physicians to dispense narcotics, and quite recently many physicians have been advised by druggists and drug inspectors that members of the medical profession are not permitted under the law to dispense narcotics. A communication published in this number of THE JOURNAL calls attention to some of the court decisions covering the disputed point.

It is very evident that the State Board of Pharmacy is stimulating the agitation. The contention is that the word "administer," as found in the law, and the word "dispense" have two separate and distinct meanings. In other words, it is contended that the physician would be permitted to administer, meaning to give either hypodermically or orally, one dose of a narcotic drug, but would not be permitted under the law to leave another dose of the drug to be given later to the patient, it being held that in the first instance the medicine is being "administered," and in the second instance, being "dispensed."

As will be noted from the decisions referred to in the correspondence of Dr. Smiley, found in this number of THE JOURNAL, the courts have interpreted the word "administer" in its broadest sense as meaning to give, furnish, supply, provide with, or cause to be given, furnished or supplied. This interpretation is in keeping with the definition of the word "administer" as found in the latest Webster and other dictionaries. Thus Webster defines "administer" as follows: "To dispense; to serve out; to supply." The attorney-general for the state of Indiana, under date of Jan. 28, 1913, in answer to a question concerning this matter, said: "I beg to say that the provision prohibiting any person, except a licensed pharmacist, to retail, sell or give away cocaine, etc., does not prohibit the bona fide use or administration of such drugs by a licensed physician, dentist or veterinarian in his practice." The opinion is sustained by the present attorney-general of Indiana in a communication of recent date. A number of decisions by United States courts have settled the question of the right of physicians under the federal narcotic law to *dispense* narcotics in any quantity, provided such dispensing is to meet the immediate needs of the patient and is made in good faith, and the narcotic is given as a medicine.

Considering all of the facts and the advices we have on the subject, we do not believe that physicians should be alarmed over the activity of the Board of Pharmacy, inasmuch as the contention seems absolutely groundless. However, it may be well in passing to call attention to the fact that when the drug act was under consideration before the Indiana legislature the physicians and druggists in a joint meeting were given a hearing before the committee, and at that time this very question arose and it was agreed among all present that the words "administering" and "dispensing" meant one and the same thing.

It is unfortunate that the Board of Pharmacy seems inclined to take unfair advantage of what even under the most favorable construction for them would be a technicality, and yet, as we have pointed out before, there is abundant evidence to show that there is a widespread agitation among pharmacists to cripple the profession as much as possible if such action holds out the slightest possibility of benefiting the pharmacists. We do not believe that these efforts ultimately will prove advantageous to those who are putting them forth.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

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It should be understood that the controversy here in Indiana concerning the legality of the practice of dispensing of narcotics by doctors applies to the Indiana drug act, and not to the federal or Harrison antinarcotic law. The medical profession offers no objection to any of the provisions of the federal law.

DR. WILLIAM L. RODMAN, President of the American Medical Association, died at his home in Philadelphia, of pneumonia, March 8, after an illness of two days. Just as we go to press we learn that Dr. W. R. Townsend, secretary of the New York State Medical Association, and a prominent physician of New York City, died suddenly. Both of these well-known physicians apparently were in the prime of life, but their deaths emphasize the fact pointed out by statistics that medical men as a class are short lived. The strenuousness followed by most doctors in their daily work, coupled with the worries incident to great responsibility, have their effect in shortening life.

OUR readers probably will be interested in knowing that the Mead's Dextri-Maltose plant, formerly located at Jersey City, is now located at Evansville, Ind. This firm has been a consistent advertiser in THE JOURNAL, and has been so firm in its belief concerning the value of ethical advertising that it has confined its advertising to those journals that follow the recommendations of the Council on Pharmacy and Chemistry of the A. M. A. That the belief is well founded is attested by the splendid growth of the plant which has moved into new buildings having sixteen times more space than the old ones. This firm is to be commended for its policy of advertising to physicians only and ignoring the practice of some manufacturers of infant foods who have attempted to educate the

public with pseudopediatrics, thereby tending to increase infant mortality and hamper the physician in the practice of scientific or even rational infant feeding. The direction of infant feeding is distinctly the work of the physician, and the Dextri-Maltose manufacturing plant is furnishing a product that meets the requirements of the medical profession, and is made and sold exclusively for physicians with no appeal or information to the public. The firm, therefore, deserves special commendation for the course it has pursued.

THE JOURNAL, at no little trouble and expense, endeavors to protect the interest of the doctor by refusing advertising copy that is objectionable, as well as refusing copy, though acceptable, from advertisers that are objectionable because of their reputation for unfair dealing. How much is this service appreciated by the readers of THE JOURNAL? The surest test of appreciation is patronage of the advertisers of THE JOURNAL and a word to that effect when placing orders. There isn't a one of THE JOURNAL's advertisers that does not offer something that all or a majority of the doctors of Indiana do not use, and we especially speak a good word for these firms because they are advertising with us in order to be in good company, to reach an intelligent and progressive class of doctors, and to get returns from what is expended in advertising.

It is announced that the last mosquito representing the carrier of the yellow-fever plague in Havana has passed away. Drs. del Valle, Guiteras and others worked for days to keep alive the last specimen which represented a relic of past terrors in Havana, but their efforts were unavailing.

The city of Havana is reported to be one of the cleanest and most hygienic cities in the world, thanks to the efforts of the medical and surgical department of the United States Army and Navy which occupied Cuba during the Spanish-American War, and not only cleaned up Havana but taught succeeding health officers how to establish and maintain sanitary conditions which many an American city might envy. Property holders are required to keep their property not only clean but presentable and attractive. A number of miniature laboratories on wheels are driven about the city in search of offenders of the pure food laws. The Havana health officers pride themselves on a successful campaign for pure milk. Sixty inspectors, all medical men, young, ambitious

and capable, are constantly at work and have authority to make arrests and take samples of any vendors' food or milk supplies for the purpose of examination. The examination is made immediately, in the presence of the salesman. If the result of the examination shows fracture of the city's pure food regulations, the offender immediately is taken into custody, fined, and his supply confiscated. If the offense occurs again, the fine is increased largely, and perhaps a prison sentence added. If the offense occurs the third time the offender's license to sell food is taken away from him, and in addition a prison sentence is added and his supplies are confiscated. As might be expected, various attempts have been made to evade the food laws, but punishment has been so swift and severe that now it is rare to find any violators of the law, though the inspectors are as vigilant as ever.

The practice of medicine in Cuba is on a cooperative system, and founded largely on the principle of disease prevention. Physicians are paid to keep the people well, and the net income of the medical profession decreases in inverse ratio to the prevalence of disease. A few large societies employ the best available medical talent to care for its members, and for the sum of \$18 a year every member of the largest society is entitled to all medical and surgical attention which he may require throughout the entire succeeding year. It is the function and duty of the physicians of this society to give attention to health, hygiene and sanitation, and in every way advise people how to keep well. These societies own modern hospitals, thoroughly equipped for the latest and most approved methods of caring for the sick, and the government is now constructing a City Hospital for Havana at a cost of approximately two million dollars. The University of Havana is also building a new and thoroughly modern hospital.

One thing that has been found absolutely necessary in order to protect the health of the citizens of Havana is to give the health authorities executive as well as advisory powers. In no other way is it possible to reach the highest stage of efficiency in enforcing sanitary and public health rules. Aside from the comfort and pleasure derived, the people of Havana have discovered that it is to their economic advantage to have improved sanitary and public health conditions. Morbidity and mortality means a money loss which should be taken into consideration in estimating the value of regulations which have to do with sanitation and public health, and it is regretted that so many of our American towns and cities fail to appreciate this fact.

Public health authorities of Havana are profuse in their apologies for what they consider inefficiencies in their system, and yet what has been and is being accomplished in the city of Havana might well be duplicated in many of our American cities that are suffering from want of adequate attention to their sanitary and public health problems.

DEATHS

KEEVER CLYMER, M.D., Goodland, died February 7, aged 84 years.

AUGUST RALSTON, SR., M.D., New Corydon, died February 6, aged 70 years.

JOHN H. SHULTZ, M.D., aged 73 years, Logansport, died February 24.

W. B. CHURCH, M.D., retired physician of Gary, died February 16, aged 79 years.

ELLIS A. SQUIRE, M.D., Frankfort, died February 14, from pneumonia, aged 68 years.

MRS. LABAN LINDLEY, wife of Dr. Laban Lindley, Paoli, died March 3, aged 65 years.

GEORGE W. DAVIS, M.D., Marion, died suddenly of heart trouble March 4, aged 65 years.

MEREDITH C. KIMBALL, M.D., Converse, died suddenly from heart trouble February 24, aged 69 years.

MARIA E. REECE, widow of the late Dr. Charles Reece, died February 22 at Gas City, aged 87 years.

JOHN A. DOWELL, M.D., Albany, was killed by a Lake Erie & Western train February 17. He was 58 years of age.

MRS. JULIET M. CROWDER, widow of the late Dr. Robert H. Crowder of Sullivan, died at Indianapolis February 17, aged 76 years.

MRS. JOSEPHINE WINANS, widow of the late Dr. Henry M. Winans, Muncie, died on the operating table at Indianapolis March 3.

WILLIAM L. EVANS, M.D., Loogootee, died February 2, at the age of 85 years. He was a graduate of the Medical College of Louisville.

JOSEPH ROSS WILSON, M.D., Hebron, was instantly killed February 12 when a fast train struck his automobile. He was 48 years of age, and a member of the Indiana State Medical Association.

WILBUR A. BEARD, M.D., New Albany, died February 2 following a three weeks' illness with grip which affected his heart. He was graduated from the Hospital College of Medicine, Louisville, 1901. Aged 39 years.

HENRY K. DEAN, M.D., died at his farm home near Central February 21, aged 78 years. He graduated from Lind University, Illinois, in 1862, and practiced medicine in Harrison County the entire time.

WILLIAM J. BROWNING, M.D., Indianapolis, died February 23 from an overdose of a stimulant for an attack of heart disease, aged 62 years. Dr. Browning formerly was assistant superintendent of Central Hospital for the Insane, and a member of the Indianapolis Board of Health, but had not been in active practice for several years.

WESLEY ALLEN, M.D., West Newton, one of the oldest practicing physicians in Indiana, died February 19, aged 80 years. Dr. Allen was born at Camby, Ind., March 26, 1836, attended Earlham College, graduated from the Indiana Medical College, and began the practice of medicine at West Newton in 1861, where he practiced for fifty-five years. He was active in the Indianapolis, the Indiana State and the American Medical Associations.

D. BURR STONE, M. D., physician in charge of the laboratory at Mudlavia, died February 21 from burns received when a can of alcohol exploded while Dr. Stone was experimenting in his laboratory on February 15. Dr. Stone was born at Burdett, N. Y., thirty-three years ago, graduated from the Chicago College of Medicine and Surgery and accepted his first position at Mudlavia in 1913, and since then has taken special work at the Chicago Laboratory.

GEORGE D. KAHLO, M.D., White Sulphur Springs, W. Va., died suddenly February 12 at Hotel Chamberlain, Old Point Comfort, from heart disease, aged 51 years. Dr. Kahlo was medical director of White Sulphur Springs; a graduate of the Bellevue Hospital Medical College, New York, in 1891; formerly dean and clinical professor of medicine of the Indianapo-

lis School of Medicine, president of the Indiana State Medical Association, and medical director at the French Lick Springs. He was a member of the West Virginia State Medical Association and the American Medical Association.

JOHN T. DICKES, M.D., Portland, died February 6, from heart trouble. Dr. Dickes was born in Mercer County, Ohio, Jan. 19, 1858, was a student at Valparaiso Normal School and Methodist College at Fort Wayne, taught school for four years, and in 1882 began to read medicine with his uncle, the late Dr. Philip Dickes, Boundary. In the fall of 1883 he entered the Medical Department of the University of Michigan and completed his medical training in the Indiana Medical College, from which he graduated in 1885. About a year later he located at Portland and continued in practice at that place until a few weeks prior to his death. He was active in the Jay County Medical Society, and a member of the American Medical Association.

DR. WILLIAM LOUIS RODMAN, President of the American Medical Association, and a noted surgeon, died at his home in Philadelphia on March 8, of pneumonia, aged 57 years. Dr. Rodman was house surgeon at Jefferson Hospital in 1879 and 1880, and surgeon in the Army from 1880 to 1882. He then removed to Louisville and was demonstrator in surgery at the University of Louisiana from 1885 to 1893. Subsequently he became professor of surgery at the Kentucky School of Medicine, professor of surgery at the Medico-Chirurgical College, Philadelphia, and professor of surgery and clinical surgery at the Woman's Medical College of Pennsylvania. He was chairman of the surgical section of the American Medical Association in 1897, and delivered the oration in surgery before that body in 1900. He was president of the American Medical College Association in 1902, and became President of the American Medical Association at the sixty-sixth annual meeting in San Francisco in 1915. Dr. Rodman was a frequent contributor to medical literature, particularly on subjects connected with major surgery.

JOHN M. KITCHEN, M.D., pioneer physician of Indianapolis, died February 5, aged 90 years. Dr. Kitchen was born in Piqua, Ohio, in 1826, attended lectures in the Jefferson Medical College, Philadelphia, graduated from the University Medical College, New York, in 1846, and began the practice of medicine in Fort Wayne,

Ind. In 1849 he went to California on a "gold seekers' ship," where he conducted a small hospital for miners, but returned and located at Indianapolis in 1851. Dr. Kitchen was a member of the Marion County Medical Society, Indiana State and American Medical Associations, and at various times held the following positions: president of Board of Trustees of Indianapolis City Hospital; trustee of the Indiana Institution for the Deaf and Dumb; physician to the State Institution for the Blind; consulting physician to the City Hospital; consulting physician to the State School for the Education of Deaf and Dumb; surgeon in charge of the United States Army General Hospital at Indianapolis from 1861 to 1865; president of the Board of United States Examining Surgeons for Pensions, 1886 to 1893. With the death of Dr. Kitchen passes the last of the earliest members of the Indiana State Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

INDIANAPOLIS

DR. J. L. McELROY has resigned as house physician at the city dispensary, and his resignation has been accepted by the board. Dr. F. E. Jackson has been appointed to succeed Dr. McElroy.

At the annual meeting of the Tuberculosis Society, held at Indianapolis, Dr. Alfred Henry was elected president; Miss Edna G. Henry, vice president; H. Thomas Head, secretary, and Mrs. A. C. Rasmussen, treasurer.

DR. HERMAN G. MORGAN, City Sanitarian, reports that there is a well-developed epidemic of typhoid fever on the south side. He attributes the cause to a contaminated milk supply. Thirty-five cases have been reported from the southern part of the city alone since February 1. Only twelve cases of typhoid fever were reported during the entire month of February last year.

THE State Board of Health is confronted with a widespread adulteration of meats, particularly the inclusion of sodium sulphite in sausage. Many samples of raw meat have been analyzed recently and the presence of sodium sulphite was

discovered by H. E. Barnard, state food and drug commissioner. Starch is also being used as an adulterant. Out of twenty-four samples taken from Muncie, four were found to contain sodium sulphite.

ACCORDING to an announcement made by Dr. Herman G. Morgan, city sanitarian, Indianapolis, a health survey of the Indianapolis schools will be started March 1. It is planned to examine every child in the schools and in case of any physical defects the child will be given proper attention. If the parents are unable to afford to send the child to a physician the work will be done under the city's supervision. Reports show that there are over 300 anemic children in the city schools; most of these children should attend the open-air schools. These schools provided by the city are now filled and there is a large waiting list.

GENERAL

DR. M. C. CLOKEY, Huntington, is taking postgraduate work in Buffalo.

DR. AND MRS. CHARLES CHITTICK, Frankfort, are spending the late winter in Florida.

DR. AND MRS. L. P. DRAYER and son, Fort Wayne, have returned from a vacation trip to Florida.

THE annual meeting of the Ninth District Medical Society will be held May 19 at Crawfordsville.

DR. R. E. INNIS, formerly of La Fayette, has located at Marion and opened offices in the Marquette Block.

THE licenses of six Bedford pharmacists were revoked recently because of improper handling and sale of liquor.

DR. J. H. HOLCOMB, for several years located at Uniondale, has opened an office at Hepburn, Ohio, and moved his family there.

THE Saint Joseph Hospital at Logansport is waging a vigorous campaign to raise funds to remove a heavy debt on the hospital.

THE forty-third annual meeting of the National Conference of Charities and Correction will be held at Indianapolis May 10 to 17.

DR. G. C. PRITCHETT, formerly located at Dana, has removed to Muncie and formed a partnership with Dr. N. D. Berry of that place.

DR. ALFRED HENRY, Indianapolis, was elected president of the Marion County Society for the Prevention of Tuberculosis at their recent meeting.

DR. M. H. KUTCH, Terre Haute, is asking the support of the medical profession of the Fifth Congressional District in his candidacy for congress.

BARTHOLOMEW COUNTY has purchased the site for their new county hospital, and the contract for the building will be let within a very short time.

NATHAN SIFTON, a chiropractor of Frankfort, recently was charged and found guilty of practicing medicine without a license. He was fined \$25 and costs.

WORK on the new Marion County Tuberculosis Hospital will be begun in the early spring. The cost of the building will be between \$70,000 and \$80,000.

DR. EDGAR F. MAGENHEIMER, Evansville, and Miss Bonnie Marie Stark, a graduate nurse, were married February 10 and left immediately for Tampa, Fla.

DR. HENRY A. ALBURGER, Indianapolis, was married February 3 to Miss Mary Littlefield, a nurse in the surgery department of the Indianapolis City Hospital.

MISS KATHLEEN SHEA, formerly of the Home Hospital, La Fayette, and the Robert W. Long Hospital, Indianapolis, has sailed for Europe for Red Cross service in France.

THE fourth class of the Gary Training School of the Gary General Hospital, consisting of seven nurses, was graduated on February 2, after completing a three years' course.

THE Daviess County Hospital, through the will of the late Miss Lizzie Hogshead, Washington, will receive between \$5,000 to \$6,000 to be used for the maintenance of the hospital.

At a recent meeting of the Sullivan County Medical Society the dentists of the county were admitted to the society as associate members. Four dentists were taken in at this meeting.

A NUMBER of Frankfort physicians have moved into the new People's Life Insurance Building in that city. This building is six stories high, and one of the most modern structures in the state.

PORTLAND is working for a new hospital. Morris Weiler, a merchant of Portland, offered to give \$5,000 for the building of such an institution provided an additional \$10,000 could be raised.

LAURA FELL WHITE, superintendent of the Goshen Hospital, has resigned and gone to California for the improvement of her health. Mrs. Georgia Boomer, assistant superintendent, will fill the vacancy.

DR. HOWARD SHAFER, the son of Dr. W. S. Shafer, Woodlawn Hospital, Rochester, Ind., who has been located in Chicago, has removed to Rochester and will take up the work of his father in the Woodlawn Hospital.

THE FRANK S. BETZ COMPANY, Hammond, purchased at bankruptcy sale the stock and business of the Truax, Greene & Co. of Chicago. The stock will be removed to the Betz Company's Hammond plant.

DR. W. C. HORN, Muncie, while visiting at Pennville a few weeks ago, was thrown from a wagon and both legs broken just above the ankles. He was taken immediately to the Providence Hospital at Pennville.

THE annual dinner of the Mu Chapter of the Phi Chi Medical Fraternity, was held at the Claypool Hotel, Indianapolis, February 26, and was attended by about seventy-five members. Dr. David Ross presided as toastmaster.

THE Tennessee State Medical Association has recently organized a new eye, ear, nose and throat section. Its first scientific program will be presented at Knoxville, April 3, one day preceding the meeting of the general session of the association.

AN epidemic attributed to contamination of drinking water has afflicted many people at Gary. The symptoms resemble those of ptomain poison. The drinking water is obtained from Lake Michigan. For several days it had a strong odor, and an examination showed a high bacterial count.

DR. AND MRS. M. T. McCARTY, Frankfort, spent a two weeks' vacation at New Orleans. Dr. McCarty is medical director of the People's Life Insurance Company, and he attended the national meeting of medical directors while there.

DR. AND MRS. CHARLES M. FRANKLIN and Dr. R. B. Wetherill of La Fayette, sailed March 2, from San Francisco for Yokohama, Japan. They will stop at Honolulu enroute, and will tour Japan extensively. They expect to be gone about four months.

MISS MYRTLE BRILL, intern at the Boehne tuberculosis Camp, Evansville, recently passed the examination of the State Board and was granted a license to practice medicine. Miss Brill is a graduate of the Indiana University School of Medicine.

ARTHUR J. STRAWSON, for several years engaged in social welfare work in Chicago and in antituberculosis work throughout Illinois for four years, has been appointed secretary of Indiana Society for Prevention of Tuberculosis. He assumed his duties February 17.

DR. EARLE S. GREEN, Muncie, who has served as captain of the medical corps in the Indiana National Guard for the past few years, has been promoted to major of the corps. This promotion assigns Dr. Green as surgeon for the Second Infantry of the state militia.

DR. GEORGE R. GREEN, one of Delaware County's best known physicians, was on February 15 married to Mrs. Maria A. Nicholson, a trained nurse of Muncie. The ceremony was performed at the Mix Hospital, where Dr. Green was recuperating from a minor operation.

DR. SAMUEL KENNEDY and wife and Miss Leefers, Shelbyville, are spending the winter at Coronado Beach, Calif. The doctor has been in the practice of medicine for twenty-five years, and this is the first vacation, longer than a week, that he has taken in that time. He expects to return about April 15.

MISS ALICE FITZGERALD, who was the first superintendent of nurses at the Long Memorial Hospital, Indianapolis, but later associated with Wellesley College, has been made Edith Cavell memorial nurse from Massachusetts, and has gone to Europe where she will be in the Queen Alexandra imperial nursing service.

DR. EDWIN R. LESCHER, Vincennes, who for several years has been associated with Dr. Eugene Bowers in conducting the Bowers-Lescher Sanitarium, has sold his interests to Dr. Bowers, and left on February 20 for Philadelphia, where he will take postgraduate work in diseases of the eye, ear, nose and throat. He expects to locate at Mt. Carmel.

THE Gary Medical Society is laying plans for establishing a medical library in connection with the Gary Public Library. Each member will be taxed \$10 per year for the establishment and maintenance of the library, which will have a room set apart for it in the public library building, and the public library authorities will assist in building up and maintaining the medical department.

THE Indianapolis Board of Health will make a special inspection of meat sold in the city by farmers. A special ordinance must be passed, because the state law to control the sale of bad meats does not apply to farmers. It has been found that farmers have sold "dead hogs" in Indianapolis and the same have been innocently consumed. "Dead hogs" are those which have died of disease and dressed and sold for food.

THE State Board of Medical Registration and Examination have announced that licenses have been granted to the following persons who successfully passed the recent examination: James C. Carter, Shelbyville; Myrtle M. Brill, Evansville; Julio Samper, Indianapolis; Maurice Lohman, Fort Wayne; S. C. Loring, Plymouth; Cora B. Murdock, Toronto, Canada, and Mary B. Newell, Chicago. The license of Mary Whery of Fort Wayne was revoked on the charge of illegal practice.

DURING February the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

W. L. Cummings Chemical Co.: Radium Bromide, Radium Carbonate, Radium Chloride, Radium Sulphate.

Borcherdt Malt Extract Co.: Borcherdt's Dri-Malt Soup Extract, Borcherdt's Dri-Malt Soup Extract with Wheat Flour, Borcherdt's Soup Powder.

DR. G. W. BROWN is beginning his fifty-second year in the practice of medicine in Frankfort. The doctor is very active, both mentally and physically. He occupies the same building where he located after being mustered from the

service where he served as Captain of Co. K, Second Indiana Volunteer Infantry for three years during the Civil War. He graduated from Rush Medical College, 1866. He is now president of the Clinton County Medical Society, secretary of the pension board, attends to a large clientele, and keeps thoroughly posted along new and scientific lines of the profession.

THE Chicago Medical Society announces the fifth annual meeting of Alienists and Neurologists of the United States, to be held under the auspices of the Chicago Medical Society, June 19 to 23, 1916, at La Salle Hotel, Chicago. An invitation is extended to Indiana doctors to attend these meetings and participate by paper or take part in the discussion of the various subjects and other matters that may come before the conference. W. T. Mefford, 2159 Madison Street, Chicago, is secretary of the conference, and William O. Krohn, 29 East Madison Street, Chicago, is chairman.

THE Council on Health and Public Instruction of the A. M. A. has published a report on public health work done by the several states. As usual, Indiana ranks well up to the top of the list, and it is a striking commentary on the efficiency of our State Board of Health when we note that Indiana is *sixth* in point of efficiency whereas it is only *twenty-first* in point of money appropriated with which to do work. This indicates that our Indiana State Board of Health, with "Live-Wire" Hurty at its head, is accomplishing splendid results, even though handicapped by less financial support than is given other states that do not rank as well in the amount and character of work done.

THERE certainly is not a little trachoma in Indiana. Forty-nine cases were found in the schools of Bartholomew County and there are probably 200 cases in Vigo County. The health department of Indianapolis estimates that there are 100 cases in that city. Dr. Hurty reports finding a case in a district school in Kosciusko County, and expresses the opinion that the disease probably would be found in fully one half of the counties of the state. Surely something must be done to suppress trachoma, and it is the duty of the doctors to join with the health authorities in warning the people. Kentucky and other Southern states are making a strong fight against trachoma. Dispensaries have been established and more than 12,000 cases have been treated. Up to date 7 per cent. of the school-children of Kentucky who have been examined have been found to be affected with trachoma.

OUR attention again has been called to the practice of some doctors in giving patients a limited time to live when suffering from some fatal or supposedly fatal malady. A prominent member of the Indiana medical profession advised the relatives and friends that a patient suffering from nephritis, and presumably in uremic coma, had but a few hours to live. The patient recovered and eventually returned to his work. The doctor now is trying to "square" himself with the family, but is having his difficulties; all of which goes to show that the wise physician is the one who is guarded in giving a prognosis, for sometimes it is impossible to estimate the resisting power of the patient, and now and then the patient with what ordinarily is termed a fatal malady shows exceptional tenacity in holding on to life. It is the duty of the physician to advise the relatives and friends of a patient's *probable* early death, but the "cocksure" attitude is seldom, if ever, justifiable.

THE Trudeau School of Tuberculosis, the first school in the world for the education of tuberculosis specialists, will be opened at Trudeau Sanitarium, Saranac Lake, N. Y., next May. Plans for this course were made by the late Dr. Edward Livingston Trudeau, and the course of study will be essentially postgraduate work for practicing physicians, research workers, and advanced students interested in the cure and prevention of tuberculosis by the fresh air treatment. Special attention will be given to clinical and laboratory diagnosis, the use of the Roentgen ray, and management of institutions. The lecturers are some of the most prominent in the country, among which may be named Prof. W. H. Welch, Johns Hopkins University; Dr. Theobald Smith, director Rockefeller Institute, Princeton; H. M. Biggs, state commissioner of health of New York; Dr. E. P. Joslin, assistant professor of medicine, Harvard University; Dr. V. Y. Bowditch, medical director, Sharon Sanitarium; Dr. H. R. M. Landis, director, Henry Phipps Institute; Dr. James Alexander Miller, chief of tuberculosis clinic, New York City; Dr. R. H. Bishop, secretary of Anti-Tuberculosis League of Cleveland, and Dr. H. Gideon Wells, professor of pathology, University of Illinois. The first session will be held from May 17 to June 28.

THE Indiana primaries have proved to be a course rather than a blessing. The scramble to secure nominations for office has resulted in the expenditure of large sums of money on the part of candidates, and following close on the heels

of nomination, secured after strenuous campaigns, must come another campaign to secure election. It has been said that by the time election is over some men will have spent nearly \$5,000 to secure offices that do not pay salaries of half that amount. It is very evident that there must be something more than the salary in sight or the candidates would not be willing to spend so much time, money and energy in attempts to secure nomination and election; but aside from all this the question arises as to the beneficial effects of our new primary law, which, it was supposed, would be such a blessing in placing the nomination of candidates directly in the hands of the people. It would seem that in the future there will be considerable difficulty in getting good men to run for office, and aside from all this, a poor man, unless helped by well-to-do friends, who probably would expect a return for the investment, will stand no chance. Our former system of selecting candidates may have had its objectionable features, but certainly Indiana did not improve matters by adopting the primary system.

CORRESPONDENCE

AN EXPERIENCE WITH THE INDUSTRIAL BOARD

PORTLAND, IND., March 5, 1916.

To the Editor:—A recent experience in caring for an injury coming under the Indiana Workmen's Compensation Act, and compensation arbitrarily adjusted by the Indiana Industrial Board, may be of interest to your readers in view of the discussion of the subject that is being published in *THE JOURNAL*. In brief, my experience was as follows:

I was consulted by Frank Beatrice, an employee of the Portland Foundry and Machine Company of this city, who had received a penetrating wound of the right eye from a piece of steel. I asked the president and general manager of the company what to do, and they both instructed me to give the patient the very best service of which I was capable. I consulted them frequently during the progress of the treatment and they told me to do whatever was necessary at all times to preserve the patient's vision and the eyeball if possible. Accordingly, I did what I deemed necessary to carry out the wishes of the management of the employing company, as also to conform to my best judg-

ment as to what was in the best interests of the patient.

I had numerous Roentgen-ray pictures taken for the purpose of locating the foreign body. Numerous efforts to remove the steel with the giant magnet were made after a consultation with Dr. Albert E. Bulson, Jr., of Fort Wayne, at St. Joseph's Hospital, which efforts came to naught, as it was impossible to remove the steel which was firmly inbedded in the sclerotic, and may have been nonmagnetic. Dr. Bulson advised me to take the patient home and enucleate the eye, and I did so. The patient was taken to the nearest hospital, at Pennville, 12 miles away, and there, assisted by Dr. Caylor, the eyeball of the patient was removed. The operation was not especially easy of performance, as the eyeball was soft and the orbital tissues considerably swollen. Care was taken to pick up the muscles and preserve as much conjunctiva as possible in order to give the patient a good stump so that the artificial eye would have as much movement as possible. I paid my car fare and the car fare of the patient to Fort Wayne, furnished and fitted the artificial eye, paid my car fare repeatedly to Pennville to see the patient in after-attention, and in fact gave the case the very best consideration and treatment of which I was capable irrespective of loss of time from my office or other inconvenience, and the results were all that could be expected, as the patient has a healthy stump and a movable artificial eye.

I presented my bill to the Portland Foundry and Machine Company, and was advised that the fee was just and equitable, but that the company carried insurance to cover these cases, and accordingly the bill was referred to the Travelers Insurance Company. A representative of the insurance company called to see me within a few days, and the first thing he attempted to do was to beat down my bill. I refused to settle for what the insurance company offered, and they then paid no further attention to the claim. I then appealed to the Indiana Industrial Board, and later appeared before the board in Indianapolis, taking a lawyer from my city with me, and spending the day out of my office. I presented fourteen letters from leading specialists of Indiana stating that my bill was reasonable for the services rendered. The insurance company introduced no evidence—in fact, not a syllable of testimony except a little circular letter from the insurance adjusters of New York City in which it was stated that the enucleation of an eye, with all after-treatment, was worth only from \$35 to \$40. No

account was taken of complications or unusual conditions and extraordinary services. The Industrial Board of Indiana arbitrarily cut my bill down almost one-half without accepting any evidence as to whether my bill was fair or just.

The question I want to raise is, do we as medical men have to submit our fees to a \$2,000,000 corporation to have them adjusted? We will do well to find out where we are at, or our liberties will be taken away entirely.

Respectfully,

M. T. JAY.

FEES DICTATED BY INSURANCE COMPANIES

EVANSVILLE, IND., Feb. 25, 1916.

To the Editor:—I think your editorial calling the attention of the profession to the manner in which the insurance companies of Indiana are dictating what the surgeon's fee shall be for surgical work done under the Indiana Workmen's Compensation Act, is timely. According to the ruling of the Industrial Board, the insurance company has absolute control of the injured persons who must accept the surgeon selected by the company, or lose all the benefits of the act. The company sends out a fee bill in which fees of about one quarter the usual charges are specified. The company succeeds in getting inexperienced physicians to agree to do the work by signing said fee bill. The company then instructs the manufacturers to call no one but the so-called surgeon specified, and to inform the injured person that if he declines to accept the surgeons specified that all his benefits from said act ceases. Again, after supplying the injured person with a so-called surgeon for a period of thirty days, the company's liability ceases and it has no further interest in the case, even though the injured employee may be a hopeless cripple resulting from incompetent surgical care. The ruling of the Industrial Board is as follows:

Bulletin No. 1, Part 2, Section 25.

"During the thirty days after an injury the employer shall furnish or cause to be furnished free of charge to the injured employee, and the employee shall accept, and during the whole or any part of the remainder of his disability resulting from the injury, the employer may, at his own option, continue to furnish or cause to be furnished, free of charge to the employee, and the employee shall accept, an attending physician, provided, however, unless otherwise ordered by the Industrial Board, and in addition such surgical and hospital services and supplies as may be deemed necessary by said attending physician, or the Industrial Board.

"The refusal of the employee to accept such service when provided by the employer shall bar said employee from further compensation until such refusal ceases, and no compensation shall at any time be payable for the period of suspension unless in the opinion of the Industrial Board the circumstances justify the refusal, in which case the Board may order a change in the medical or hospital service.

"If in an emergency on account of the employer's failure to provide the medical care for the first thirty days, as herein specified, or for other good reasons, a physician other than that provided by the employer is called to treat the injured employee during the first thirty days, the reasonable cost of such service shall be paid by the employer subject to the approval of the Industrial Board."

A case in point: A workman while at work received an injury, which produced a rupture. He said he applied for help, the agent told him who he could have to operate on the rupture, but as he had no confidence in the physician designated, he declined to have the operation performed unless he could have it done by a surgeon he had confidence in and he so informed the agent. He even went so far as to tell the agent that he could get the work done for \$100. The agent retorted by informing him that the work could be done for one fourth of that amount, and declined to have anything more to do with the case. It now has been about three months since the injury, and he has received no benefits whatever.

It is plain to be seen from the ruling of the Industrial Board that the injured person is wholly at the mercy of the insurance company.

Respectfully,

A. M. HAYDEN.

DISPENSING NARCOTICS

INDIANAPOLIS, Feb. 15, 1916.

To the Editor:—On Nov. 30, 1915, Messrs. Hemphill and Long, State Drug Inspectors, called at my office and informed me that I was violating the Indiana Drug Law by dispensing narcotics, and that under that law I was not allowed to dispense any narcotics whatsoever, and, further, that if I continued I would be subject to arrest. I might say that up to that time, dating from March 1, 1915, I dispensed narcotics just twenty-five (25) times, having written prescriptions for all others. I am informed that other physicians over the state also have been unjustly intimidated.

Inasmuch as the contention is that the words "administer" and "dispense" have separate and distinct meanings I am sending you herewith, citations of the law, federal and state, giving

legal interpretation of the word "administer" as it occurs in the Indiana statutes. For the benefit of the physicians of the state, I ask you to publish this over my signature.

REGULATION OF THE PRACTICE OF MEDICINE

A very interesting and important decision was rendered by the United States District Court, Western District of Tennessee, on June 1, 1915, in the case of *United States vs. Friedman*, 224 Fed., 276.

The indictment charged the defendant, a physician, with dispensing, distributing and prescribing certain of the included drugs without such dispensing, distributing and prescribing aforesaid being in the course of his professional practice, that is to say, that he dispensed, distributed and prescribed the aforesaid drugs in quantities more than was necessary to meet the immediate needs of the patient and did not distribute, dispense and prescribe the drugs in good faith and as a medicine.

The defendant demurred to the indictment upon various grounds, among which—that the acts averred in the indictment are not prohibited by law nor are they in violation of any law of the United States. The indictment was drawn under Section 2 of the law, with particular reference to subdivision "a" relating to medicinal dispensing and is the first decision construing that important subdivision.

The court states that it fails to find in the act of Congress, under examination, any language that would make the doing of the things with which this defendant is charged a violation of the law. In other words there is no limit fixed to the amount of said drugs that a physician may prescribe nor is there any duty imposed upon him other than to keep a record of all such dispensing by him and the name and address of the patient, and must preserve the records for a period of two years. For failing to do either of these things he is not indicted. The indictment was quashed.

The important and fundamental proposition here established is—that there is no limit upon the quantity which a physician may dispense, provided such dispensing is to meet the immediate needs of the patient and is made in good faith and as a medicine.

JUDICIAL INTERPRETATIONS OF THE WORD "ADMINISTER"

Indiana.—In the case of *McGaughey vs. the State*, 156 Ind. 41, the court declared in its opinion that "the word 'administer' in said section (of the criminal statutes) does not signify merely the manual administering of the drug, medicine or substance, but it has a wider

meaning. . . . As used in said section the word 'administer' was clearly intended to be used in the broadest sense, making it an offense to give, furnish, supply, provide with, or cause to be given, furnished, supplied or provided with any such medicine, drug or substance. . . . And said word embraced and was intended to embrace every mode of giving, furnishing, supplying, providing with, or causing to be taken, any such drug, medicine or substance."

Among the definitions of the word "administer" are the following: To furnish, to give, to administer medicine, to direct and cause it to be taken: to supply, to furnish, or provide with.

The presence of the person charged with administering any drug, medicine or substance while the person to whom such drug, etc., was administered does the act of taking such drug, etc., is wholly immaterial.

(Other cases holding in accord with above: *People v. Quin*, 50 Barb. (N. Y.) 128; *LaBeau v. People* 34 N. Y. 223; *Chandler v. State*, 105 Pac. 375; *Burris v. State*, 84 S. W. 453.)

Delaware.—The primary definition of the word "administer" is to give. The word is not a word having a strict legal and technical import. It is a word in general use, with a commonly accepted meaning, and where a person is charged with administering noxious medicine it is the same as charging him with giving such medicine. *State v. Jones*, 53 Atl. (Del.) 858.

Wisconsin.—A statement charging a woman with "administering" to her daughter "pills to drive off a child" in their natural meaning charges her with attempting to procure an abortion on her daughter. This is the natural import of the words spoken, and they convey to the minds of ordinary persons the charge of a crime.—*Filber v. Dautermann*, 26 Wis. 518.

Ohio.—By the court: "We think counsel are wrong in assuming that the word 'administer' always and necessarily implies service. If it does it often implies service to a very unwilling master. Such is the case when the law is administered to a criminal. The word 'minister' is said to be derived from the same root as the Latin word 'manus'—the hand. Etymologically, therefore, the word 'administer' would seem to apply to anything that could be done by the hand to or for another."—*Blackburn v. State*, 23 Ohio St., 146.

N. B.—Search was made for cases only where the word "administer" was used in connection with medicine, drugs, etc.

ORVALL SMILEY, M.D.

229 Newton Claypool Bldg.

CONCERNING "ADMINISTERING" NARCOTICS, UNDER THE INDIANA DRUG LAW; COURT DECISIONS

INDIANAPOLIS, March 13, 1916.

To the Editor:—There is before us your letter of the 7th regarding the controversy over the meaning of the phrase "legitimately administer" as it now appears in the state narcotic law.

We have a very clear recollection of the efforts made to so word this state narcotic law that some very desirable restrictions on the distribution of narcotics would be enacted and yet the duties and rights of physicians would not be changed. When the amendment that now appears in the law was drafted it was very carefully studied and in answer to a question the author of the amendment stated that "administration" was a word having a known meaning in the laws of the state and gave full liberty of action to physicians. Before the law was passed by the legislature this statement was confirmed by conversations with other attorneys.

In *Corpus Juris* there are, we think, fifty cases where our courts have interpreted the word "administer." Some of the more important of these cases are referred to in the enclosed brief. Attention is especially directed to the decision of our state supreme court in *McGaughey vs. State*, 156 Indiana, page 41. This decision was given before the narcotic law was enacted and was the meaning which attorneys read into the word administer when the amendments to this law were under consideration. Since the narcotic law was enacted the supreme court of the state has rendered another decision confirming the interpretation given in the *McGaughey* case.

The pharmacy board has a very fragile peg in the word "legitimate," but it is not likely this word or phrase "legitimate administering" will support a very profound or weighty decision contrary to the views already declared by the state supreme court.

Since the enclosed brief was written, the U. S. Court, Western District of Tennessee, gave out a decision that there is no limit on the quantity which may be prescribed or dispensed, except the requirements of the case.

I think an abstract of this decision has been sent to you.

I am of the opinion that up to two months ago the Board of Pharmacy had never heard of

the court decisions referred to in the attached brief, and I doubt very much if they have found them yet. Surely they would not think that a regulation from their board would overrule the decision of the state supreme court.

Being in an advantageous position it behooves the members of the Indiana State Medical Association to maintain their ground and to do nothing that can be twisted into supporting a claim that the word "administer" in the state narcotic law means anything different from its meaning in other state criminal laws.

Many physicians over the state have been annoyed by the pharmacy board inspectors who have misinterpreted the law. One of the board members gave me his personal assurances that this would stop, but I am told the annoyance has continued. If the Indiana State Medical Association is on firm ground, and of this there can be, it seems, no doubt, it is highly desirable that the pharmacy board be made to confine its activities within legitimate limits.

A clear statement of right in *THE JOURNAL* will be of great benefit to the physicians of the state—all of whom place much reliance on your advice and suggestions.

If you care for a more complete abstract of the cases in *Corpus Juris* I will get it for you.

Yours truly,

A. D. THORBURN.

DEFINITIONS AND COURT DECISIONS DEFINING THE WORD "ADMINISTER"

The Drug Act in Force April 21, 1911, See Act of 1911, Page 45, as Amended by the Act Approved March 6, 1913, See Act of 1913, Page 306.

This, the above, Section 1 of the above act appears as Section 2494A-R. S., 1914.

After the bill was introduced in the legislature in 1913, an amendment was offered in the house embodying the last proviso in said Section 1, exactly as it appears in the law. The amendment was approved. Under the familiar rule of construction this proviso, being the last of the section, controls, and if necessary supersedes, all that has gone before in the section.

We direct attention to this provision of the law that applies to physicians. We submit that the law clearly provides, among other things, the following:

First.—That wholesalers, jobbers or manufacturers can sell at wholesale direct to duly registered practicing physicians, any or all of the articles mentioned in said law.

Second.—That such wholesaler, jobber or manufacturer shall keep a record of such sale as provided in said law.

Third.—That said duly registered practicing physician can legitimately administer any or all of said drugs to his patients.

Fourth.—That the words "legitimate administering" includes prescribing such drugs for such patients, so that the patient may go to a pharmacist, and procure such drug himself, or the physician may deliver such drugs to such patients to be taken pursuant to the written label of such duly registered physician.

The law clearly does not contemplate or require that a physician shall visit a patient and prescribe at each separate visit any portion of any drug mentioned in said act. Such a construction would be so unwarranted, expensive and oppressive on the patient as to practically render the law nugatory in many instances. Thousands of physicians who practice throughout the country would be required every few hours to make a visit to the bedside of a patient, if the patient was prohibited from taking a dose of medicine containing any drug, mentioned in the law, unless the physician was personally present to administer same. The common, sane and sensible practice in thousands of instances throughout the country, is for the physician to make a visit and leave medicines, at such visit, to be taken at intervals named by the physician in his prescription and order.

DEFINITION OF "ADMINISTER"

Webster defines the word "administer" as follows:

"To dispense; to serve out; to supply; to administer relief; to apply, as medicine or a remedy; to give as a dose, or something beneficial or suitable."

The Standard Dictionary defines the word "administer" as follows:

"To supply; furnish, or provide with; as something necessary or required; to apply or superintend the application of; to mete or measure out."

The Century Dictionary defines the word "administer" as follows:

"To give or apply; to make application of, as to administer medicine; to afford; to supply; dispense; bring into operation."

In Russel on Crimes, Volume 1, Star Number, Section 734, the author defines the word "administer" as follows:

"I am of the opinion that to constitute an administering, is not necessary that there should be a delivery by the hand."

In Volume 1, Corpus Juris, page 1238, the word "administer" is defined as follows:

"The word has not a strict legal or technical import, but its primary and commonly accepted meaning is to give. In its ordinary acceptation the word means to furnish; to give; dispense; to give, supply or dispense; to direct or cause to be taken; to supply furnish or provide with, to control or regulate in behalf of others; to dispose, direct the application of."

DECISIONS OF COURTS DEFINING THE WORD "ADMINISTER"

The courts have frequently been called on to define the word "administer," generally in criminal cases. The statute in question is a criminal statute, and therefore these definitions are applicable.

In every case found in the books, the word "administer" has never been limited to personal direct application. In every case the word "administer" has been

defined to be the direct personal giving or application, or the indirect giving or application, when made under the directions of the physician or defendant. The cases have usually risen under the statute prohibiting the administering of the drugs and poison.

In the case of *State vs. Wilson*, 71 Kansas, 263, the court says:

"That it is sufficient for one who procured and delivered to a woman a drug for an illegal purpose, without proving that she took the drug. That the above was equivalent to charging that the defendant administered the drug."

The case of *State vs. Marrow*, 40 S. Carolina, 221, is an interesting case.

There the defendant procured a drug in one state and sent it to a woman living in a foreign state to be taken by such woman. The court held that this was administering a drug. The medicine so sent was sent in the shape of pills through the mail, with advice to take the same. The court held that such sending and directions constituted administering.

In the case of *Burris vs. State*, 73 Arkansas, 453, the court quotes in full the definition of the word "administer," as defined by the supreme court of Indiana in the case of *McGaughey vs. State*, 156 Indiana, page 41, and he elaborates on the above decision and approves of it in total.

In *Blackburn vs. State*, 23 Ohio, 146.

The defendant furnished the drug to the deceased and she took it, although he was not present when she did so. The court decided that that is administering under the law.

In the *State vs. Stapp*, 246 Missouri, 338.

The defendant was charged with administering poison. He gave instructions to the woman how to take the medicine, and instructed her to take it the next day. The court held that that was administering the drug.

In *State vs. Moothart*, 109 Iowa, 130.

There the whole question turned on the definition of the word administer. The defendant had purchased a drug to give a woman for a criminal purpose. He sent it to her by mail. She took two doses. The court then says:

"It is argued that to *administer the drug* the defendant must have been personally present, and have given it to Martha Marr to be taken. It is said, 'The statute contemplates that the administering shall be as personal and direct as where it uses the words "used any instrument." The words, "used any instrument, or other means," as found in said section, do not mean that the accused must have performed an operation in person with the instrument or other means. He uses the instrument or other means when he furnishes them to be applied to the forbidden purpose, and he furnishes it for the same purpose. Sending a drug by mail to Martha Marr, to be taken by her for this forbidden purpose is so clearly an administering of it, within the meaning of the statute, as to require neither argument nor citation.'"

The whole question, however, has been definitely and finally decided by the supreme court of Indiana in the case of *McGaughey vs. State*, 156 Indiana, page 41.

In that case the question, and the whole question, was the true definition of the word "administer." The whole cause, in fact, turned on the proper defini-

tion of the word "administer," and we submit is binding on all, and fully defines the word "administer" under the Drug Act of 1911 as amended in 1913.

In the case of McGaughey, the defendant was charged with administering drugs for criminal purposes contrary to the statute of Indiana. The court on page 42 quotes the various definitions of the word "administer" as follows:

"The word administer in said section does not signify merely the manual administering of the drug, medicine, or substance, but it has a much wider meaning. Among the definitions of said word are the following: 'To furnish, to give, to administer medicine, to direct and cause to be taken.' 'To supply, furnish, or provide with.' As used in said section, the word administer was clearly intended to cover the whole ground named, making it an offense to give, furnish, supply, provide with, or cause to be given, furnished, supplied, or provided with, or taken any such drug, medicine or substance, with the intent and either result named in said section. And said word embraced and was intended to embrace every mode of giving, furnishing, supplying, providing with, or causing to be taken any such drug, medicine or substance. This is both the letter and the spirit of the section."

In the above case the woman did not take the drug when the defendant was present, but the court declares the law to be that the defendant administered it to her just the same, and says:

"If he furnished it to her, and she afterwards, when he was not present, took the same, he administered said drug to her within the meaning of the said section."

From all the foregoing, it must be presumed that the legislature enacted the law of 1913, having in view the definition of the word "administer," as therefore repeatedly defined by the courts of last resort, throughout the country, but especially having in view the definition of the word "administer" as finally and conclusively defined by the supreme court of the state of Indiana.

To give it any other meaning would be directly contrary to all definitions of lexicographers, and to the uniform decisions of the courts as well. It would result in subjecting to repeated prosecutions, thousands of physicians who honestly and conscientiously are repeatedly compelled to leave with patients one or more doses of one of the drugs mentioned in the act, such doses to be taken at intervals thereafter as prescribed by the physician. Such drug must be taken under such prescription, but when the physician cannot possibly be present.

It is within the common knowledge of us all that this is the way that medicines are administered and taken, especially during the night, or when the physician is at a long distance, especially in the country districts. It cannot be supposed, that the legislature, knowing the common practice of physicians throughout the state, could have had any other purpose whatever in adding the last proviso to Section 1 of the law. If the legislature had so intended it would have qualified the word "administer" so as to limit the meaning of the word to personal direct administration. No such intention rested in the minds of the legislature whatever, nor can any such narrow construction be read into the statute.

Respectfully submitted. WILLIAM L. TAYLOR.

PUBLIC HEALTH

POLLUTED water has appeared at Gary. The City Board of Health reports that hundreds of citizens were made ill by drinking the public water supply in February. Intestinal troubles are complained of. The State Board of Health says that every winter the lake towns of Indiana report intestinal troubles which frequently are called "Winter Cholera." Michigan City, Gary, Indiana Harbor, Hammond and East Chicago all have suffered at times from lake water. The State Board of Health also says Lake Michigan water always should be filtered.

DR. DAVID C. PEYTON, superintendent of the Indiana Reformatory, in an excellent article contributed to the Indiana Times on Principles of Prison Reform says: "A careful analysis in the psychologic laboratory of the Indiana Reformatory proves that more than 50 per cent. of the inmates are mentally subnormal, and a large percentage of the other 50 per cent. are tainted with a neurotic strain which renders them unstable in their general moral and mental make-up. Such defectives fall easy victims to the downward influences under which they may happen to come." Dr. Peyton also refers to ill health as being a cause of crime which must not be neglected.

GEORGE S. WILSON, superintendent of the Indiana School for the Blind, in his report for the year ending Sept. 30, 1915, presents an excellent essay. In this essay he says: "We must assume that right birth and chance for growth and reasonable opportunity for service are inheritances to which every individual component of such is justly entitled. Each child, therefore, should have a fair start. This means that birth should give no unsurmountable hereditary impediments. Prophylactic measures will invariably fail when the structure is fundamentally faulty. They may serve to reduce irritation but will not cure primary weaknesses. The state should recognize it is imperative that the current of blood must run pure or irreparable injury will be entailed upon the offspring." The above is fundamentally true doctrine. Put it into actual practice and the number of blind and other defectives would be enormously decreased.

SOCIETY PROCEEDINGS

THE MUNCIE ACADEMY OF MEDICINE

Meeting of Jan. 28, 1916

Regular meeting of Muncie Academy of Medicine was held Friday evening, January 28, in the Y. M. C. A. Building and was called to order at 8:30 by President O. E. Spurgeon.

Dr. J. C. Quick spoke for a few minutes on "Whooping Cough," saying: Pertusses, uncomplicated, is rather easy to treat. The best treatment is antiseptic in its nature, and I prefer ammonium carbonate and eucalyptus. The incubation period is from eight to fourteen days. The most serious complication is bronchopneumonia.

Dr. Molloy: Whooping cough is really an important disease. More than 10,000 die annually in the United States with the uncomplicated disease. Whooping cough following measles is always serious. Every house covering a pertusses patient should be flagged so that visitors entering do so knowingly.

Dr. Wadsworth: We are likely to forget that whooping cough is no respecter of age, nationality or climate and is particularly dangerous in the infirm and aged.

Dr. Stephens: I have treated several cases with the bacterins with universal success.

Dr. B. B. Morrow read a paper, "The Significance of Cough," saying: Coughing may be inaugurated in a great many ways. The most important is by stimulation of the sensory fibers of the superior laryngeal nerve in the mucous membrane of the larynx, the essentially sensitive portions being interarytenoid mucous membrane and the region of bifurcation. In the vast majority of cases due to inflammation of the respiratory tract the surface of the mucous membrane has been pathologically changed by the inflammatory process and this leads to a marked increase in its excitability. Ability to cough may be greatly diminished or absent. Whatever the cause the lung is in danger, not only from the introduction of foreign bodies, but also from retention of its own secretions. The act of coughing is not always a harmless process. It has a marked effect on the circulation, producing marked increased arterial pressure, acts as an impediment to flow of blood from the systemic veins into heart; this produces a varicose condition in veins of head and face which may become permanent. In the mechanism of the different kinds of cough, they are divided into two classes, dry and moist. The moist cough is due to presence of fluid secretions in bronchi or trachea. Dry cough, where no secretion is present or where its consistency is such that patient is unable to remove it. Violent coughing paroxysms due to intense excitants or irritants or because of an increased sensibility of the nervous cough apparatus; by central irradiation from the cough center within the medulla, vomiting may occur, while if due to the compression of the intrathoracic veins, venous stasis may be so great as to lead to unconsciousness or convulsions. Nervous cough is sometimes a lifelong habit, showing itself when the individual is embarrassed or when his attention is called to it.

The barking cough of children is probably associated with some lesion of the upper-air passages and is not serious. Cough on exertion is usually due to heart disease. Cough on change of position accompanied by profuse discharge of sputum indicates pulmonary abscess or bronchiectasis. Winter cough, the cavities remain dry in summer but become infected in winter, usually diagnosed chronic bronchitis, but many of them are pulmonary tuberculosis.

Adjourned.

Meeting of February 11

Dr. G. R. Andrews told of two patients who had repeated attacks of intense abdominal pain simulating gallstone colic and appendicitis, both of which on operation revealed well-organized apertures in the omentum through which loops of gut became entangled. Relief followed omental repair.

Dr. O. E. Spurgeon read a paper on "Bronchitis," saying: I will consider briefly capillary bronchitis and chronic bronchitis. Capillary bronchitis is known as catarrhal pneumonia, lobular pneumonia and bronchopneumonia. This disease is a form of sepsis, localized in the lungs and as the name should indicate the pathologic condition, I would suggest the name pulmonary sepsis or septic pneumonitis. This certainly is a true sepsis. If we study the temperature chart in this disease we find the irregular fever so characteristic of sepsis. In the diagnosis of septic pneumonitis I rely mostly on the temperature chart and the blood findings. The leukocytes are increased in number, and we have some cough and some râles. Until the last few years these cases either died or ran a very prolonged course and then slowly regained their health after weeks or months of sickness. I have treated quite a few cases and have found most of them to respond within a few days to vaccines. I believe I can safely say that of the cases so treated the average time at which the temperature went to normal and remained there was one week, and that convalescence was complete within two weeks. Besides vaccines I have used other medicines as indicated, for example, creosote carbonate. Chronic bronchitis or chronic catarrhal bronchitis may exist as an independent disease or it may be secondary to some predisposing condition. It is a frequent complication of pulmonary tuberculosis, emphysema, chronic endocarditis, chronic nephritis and may be due to continued inhalation of some irritating substances. Where we can find no complicating condition which is evidently the underlying cause it has been my experience that treatment is of little help. A new organism, the cause of simple bronchitis, should be worked out.

Dr. Morrow gave an example where one-eighth grain of apomorphin produced greater and more lasting effects in the relief of recurrent upper abdominal pain than three-eighths grain of morphin sulphate combined with hyoscin had been doing.

Adjourned.

Meeting of February 18

Dr. D. M. Green read a most interesting paper on "Vertigo," saying in part: One can speak of a pure vertigo, but it is apt to be associated with one or more accessory phenomena, such as nausea, vomiting, nystagmus, pain, deafness, etc. These accompanying

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phenomena are of considerable value in localizing the mechanisms involved and determining the nature of the lesions. Those of auditory, cerebellar, arteriosclerotic, labyrinthine, brain tumor and gastrointestinal origin, represent the usual types. Probably all true vertigo is conditioned by the involvement of the paths of the vestibular-nerve, whose connections, however, are very intricate and complex. It has been established without much doubt that the ear labyrinth is the chief organ in the body connected with the receiving of impressions of its position in space. The labyrinth belongs to a series of organs that are concerned in the sense of equilibrium and are affected by the physical facts of gravity. The connections of the cerebellum with all the organs whose functioning is recognized in the consciousness of space relations are now fairly well known. The sense organ of equilibrium proper consists of (1) a center, the cerebellum, communicating by connecting fibers with various nuclei in the medulla and pons; (2) a nerve trunk which forms the inner root of the auditory nerve (eighth cranial) passes with it into the internal auditory meatus, and is distributed, under the name of the vestibular branch, to the vestibule; (3) a peripheral end organ, consisting of the semicircular canals, the utricle and the saccule. These structures contain the peripheral terminations of the nerve which, generally speaking, consist of hair cells. These hair cells are supposed to be acted on by currents in the endolymph, the currents being caused by changes in the position of the head. The three semicircular canals correspond to the three dimensions of space. Disease or disorder which shows any perturbation of the sense of equilibrium (which is known as vertigo), may be more or less accurately localized within the component parts of this sense organ of equilibrium. Of distant troubles causing vertigo, the most frequent are the various disturbances of digestion. In these cases vertigo is usually slight and transient. Constipation, vertigo or dizziness, is common enough. Both are relieved by elimination, thereby freeing the system of certain circulating toxins absorbed from the digestive tract. Various disturbances of the circulatory system may cause vertigo. The trouble may lie in the blood, the heart or vessels. Of the blood diseases, pernicious anemia is one most frequently attended by vertigo. Certain cases of leukemia and Hodgkins disease show the same symptom. Marked hemorrhage is accompanied by vertigo. In all of these the symptom probably is due to cerebral anemia. Among drugs which cause vertigo are alcohol, quinin, the salicylates and the complex derivatives of tobacco smoke. Any lesion of any kind interfering in any way with the sense organ of equilibrium may cause vertigo. Examples, tumors or abscesses of the cerebellum or pons, localized hemorrhage or basilar meningitis. The treatment of vertigo is the treatment of the condition which causes it, hence accurate diagnosis is of first importance.

In the discussion Dr. W. A. Hollis made a very clear explanation of the function of the semicircular canals and their contents in maintaining the sense of equilibrium, and their action in warning the ego of imminent danger from the loss of bodily balance or insecurity.

Adjourned.

H. D. FAIR, Secretary.

First meeting of the year was called to order at 8:45 in the assembly room by President G. Van Sweringen, with fourteen members present. There were no minutes of the preceding meeting, since this was the annual banquet. Dr. A. E. Bulson, Jr., reported a case of penetrating injury to eye by flying piece of steel, in which an attempt at removal by the giant magnet was unsuccessful even though the opening through the sclera was made close to the position of the foreign body as determined later following the enucleation which proved necessary. Generally speaking he stated that enucleation was indicated by (a) the site of injury (particularly the ciliary region); (b) nature of penetrating body; (c) evidence of infection.

Dr. Glock said that enucleation was the safe procedure except when the penetrating body was a piece of glass or a piece of steel or iron completely contained within the lens. Cited a case illustrating latter exception which, however, developed secondary glaucoma and necessitated a removal of the lens. Useful vision in the eye resulted.

Dr. R. M. Bolman, having failed to appear with the clinical case for diagnosis, Dr. Bulson then read a paper on "Fundus Lesions in Nephritis."

Dr. Bulson stated that so far as the eye lesions are concerned there is no occasion to separate chronic nephritis into distinct types, as the fundus lesions are essentially the same in the various stages of the disease. He also considers it unnecessary to differentiate between general arteriosclerosis and chronic nephritis, so far as the fundus lesions are concerned, except as to the stage of the disease, for, as stated by him, whatever the form of nephritis the ophthalmoscopic picture is essentially the same in any of the so-called types of chronic nephritis now recognized as local forms of a general arteriosclerosis, and without the arteriosclerotic changes is the same ophthalmoscopic picture as presented in acute nephritis. In any case we are dealing with the effect of toxic substances in the blood, which, in the process of elimination, are brought into intimate contact with the vascular system of the fundus of the eye and induce endovascular and parenchymatous changes in the retina. The fundus alterations are very largely a question of degree or stage of progress rather than a question of distinctive type of retinal alterations to conform to a certain form of kidney pathology. Renal retinitis occurs at all periods of life, but is most frequent between the ages of 30 to 60 years. It has occurred in a child of 5 years of age. It occurs twice as often among men as among women, and while males are more often affected in adults, females are more often affected than males in the young. The very early retinal changes may be found in acute nephritis if the eye is examined sufficiently early. Albuminuric retinitis occurs about once in every 3,000 pregnancies. It usually occurs in the second half of pregnancy, although it may occur at any time, and, as a general thing, vision is impaired permanently. In chronic nephritis the eye lesions are associated with high blood pressure and present all of the stages of hyperemia, exudation and hemorrhage.

The effect on vision depends entirely on the extent and location of the exudative changes. The lesions are often discovered before the urine shows albumin or casts. The earlier lesions are minute, white or milky-colored dots of exudation, few or perhaps many in number, which appear in the neighborhood of the disk, and most frequent in the macular region; haziness and hyperemia of the disk; beaded appearance of some of the larger arteries from thickening of the walls and distention of the smaller terminal veins; and relative scotomata, either with or without visible retinal alterations. Any two or all of the lesions may co-exist. Later on the vessels, particularly the arterial twigs, present a cork-screw appearance and the veins show compression where the hardened arteries cross. The earliest lesions sometimes disappear with change in the mode of life, improved hygienic and dietary regulations, and such therapeutic measures as seem indicated. Among the later lesions are the brick-red color of the fundus; the "silver-wire" arteries, indicating thickening of the vessel walls; hemorrhages, sometimes punctate but more often radiating or flame shape; and occasionally the peculiar star-shaped arrangement of the white exudates around the macula, which is considered almost pathognomonic of nephritis. Attention was called to the fact that the picture occasionally is identical with that observed in syphilitics, and accordingly the differential diagnosis will depend on the negative urinary findings, clinical history, results secured from blood-pressure apparatus, and thorough blood examination, not omitting a Wassermann. Extensive fundus alterations usually indicates that a fatal termination is impending, and Bull's statement was quoted to the effect that the duration of life following typical albuminuric retinitis in the majority of cases is not to exceed two years, and a great many of them die earlier. Sudden blindness in both eyes means uremic amaurosis, whereas if the blindness occurs in one eye only it may indicate retinal detachment or closure of the central artery of the retina. The paper closed with the plea for more care in the examination of the fundus of the eye in those cases which present themselves for change of glasses, vague ocular symptoms, and especially in those cases which present headache and suspicious symptoms of toxic disturbance. A critical and painstaking ophthalmoscopic examination through a widely dilated pupil should be considered in connection with the findings obtained through a carefully taken case history, physical examination, and the results of a urinalysis and blood examination.

Discussion opened by Dr. A. C. Bartholomew who cited case seen (for refraction headaches) without indication of general disease which showed "fuzziness of disk." Six months later, during an examination preceding an interval appendix operation, large amount of albumin and many casts were found.

DR. H. E. GLOCK: Albuminuric retinitis best treated by general practitioner or internist; that so many cases come to oculist without previous suspicion of nephritis is a reproach to the general diagnostician. General vascular changes always precede the retinal changes and should be detected by proper diagnostic method.

DR. BEALL: Retinal changes are not early changes. Condition should be recognized long before in the

blood pressure. The changes are primary in the terminal arterioles and secondary in the retina. Albumin and casts are also late signs of cardiovascular diseases. Symptoms referable to nervous system and nocturia are particularly important early diagnostic signs.

Normal blood pressure probably 135 to 136 for any age. Even a slight rise means decreased expectancy according to life insurance statistics. Quoted illustrative statistics.

The discussion was closed by Dr. Bulson, who said many of these cases consult ophthalmologists first and only subsequently are found to have albumin, casts, high blood pressure, etc.

Foci of infection are important sources of cardiovascular disease. Removal of such foci is often followed by prompt lowering of the blood pressure.

Application of Dr. E. C. Cekul read and referred to board of censors.

Moved and seconded that the deficit of \$15 for the banquet be paid out of treasury. Carried.

Announcement of next meeting.

Meeting adjourned.

MILES F. PORTER, JR., Secretary.

CLINTON COUNTY

The regular meeting of the Clinton County Medical Society was held at the Armory, Frankfort, at 4 p. m., Thursday, March 3.

A paper on "Intravenous Medication" was read by Dr. H. N. Oliphant, Frankfort, and all members present took part in a broad discussion of the subject.

A banquet at the Garber Café followed the meeting at 7 o'clock.

Adjourned.

H. N. OLIPHANT, M.D., Secretary.

DELAWARE COUNTY

Regular meeting of Delaware County Medical Society was held in Muncie Y. M. C. A. Building Friday evening, February 4, and was called to order at 8:15 by President C. A. Ball.

A request from the committee appointed by Governor Ralston to investigate the epileptic and feeble-minded problem in our state, that our society cooperate and lend its moral support was officially granted.

Dr. Albert E. Sterne, Indianapolis, conducted a neurologic clinic of great interest and profit, devoting his limited time to three patients.

Case 1.—Boy, 8½ years. Now in fair health. Appetite fair. Sleep light. Bowels regular. Urine negative. Birth instrumental. Breast-fed baby. Had frequent attacks with fever during first year or two, cause unknown. Began to walk at 2 years of age; mother then first noticed trouble. He did not lift his feet, heels dragged, and could not arise readily when on floor. She then noticed fullness in the calves. Muscular development is now poor. Calves are still large. When arising from floor he gets on his hands and knees and then puts his hands on knees, then thighs, walking up his legs, so to speak. He has made slight improvement of late. Does not learn readily in school. Memory is good. Diagnosis: Progressive muscular dystrophy.

Case 2.—Man, aged 61. Was well up to 25 when he had an attack of jaundice which lasted a month. No gallstones. At the age of 30 he began having vertigo on changing his position from recumbent or sitting to standing. This symptom more or less constant up to past three months. At age of 47 he began having intercostal neuralgia on both sides, present most of time for two years. He was compelled to give up his work. In 1911 he took malaria, which lasted all one summer. Began work again in 1912. January, 1915, noticed that his stools were black for several days. Jan. 21, 1915, he fainted while at his office. Was taken home and that evening vomited about 1 quart of dark blood. About two weeks later rose spots appeared on the abdomen and a positive Widal was obtained. In a few weeks neuritis appeared in arms and legs. At present complains of weakness in left leg and paresthesia of the foot. Cannot distinguish sharp from dull objects. Examination: Argyll Robertson pupil present. Pupillary reflex to light absent. Reflex of accommodation present. Right shoulder low, lateral curve to left in lower dorsal and lumbar area. Romberg sign present. Cannot walk with eyes closed. Patellar reflex very slight in both legs. Has no girdle pains, and no atony of the bladder. His gait is just beginning to be disturbed since weakness of left leg has appeared. Blood pressure: Systolic, 122. Diastolic, 76. Pulse, 80. Diagnosis: Lues, gumma.

Case 3.—Man, aged 60. No early history. In 1913 had hard "nervous" chill followed by gradual impairment of function of right arm and leg. One year later could not raise arm to horizontal because of pain; walked with shuffling gait. Polyuria. No examination of urine till January, 1916, following an attack of la grippe. Specific gravity, 1.028; trace of sugar. No albumen. Present condition, muscles of shoulder atrophied. Exaggerated patella reflex. Pupils respond to light. No elevation of temperature. Urine, specific gravity, 1.032. Much sugar. Diagnosis: Hemiplegia associated with diabetes.

During Dr. Sterne's splendid talk he made the following apropos averments: Progressive muscular dystrophy usually results in dementia unless intrathoracic complications cause an early death. For some obscure reason this disease is generally familial and treatment is useless. Systolic blood pressure, indicating what heart can do, is of less importance than diastolic which tells what heart is doing or must do. Do not discard old remedies in lues. In well-advanced cases they produce better results than salvarsan or neosalvarsan. Many times reflexes, in themselves, are practically valueless as a diagnostic factor. A horse serum charged with mercury ought to make an efficient treatment for syphilis.

Adjourned.

H. D. FAIR, Secretary.

DUBOIS COUNTY

Dubois County Medical Society met in special session at City Hall in Huntingburg, Tuesday, February 8, at 1 p. m., President Kelso in the chair.

Minutes of previous meeting read and approved.

Regular order of business dispensed, and special business of the meeting taken up, which was to formulate plans for a "Baby Week" observation. The

various women's organizations, clergy, schools and the press of the county were represented.

It was decided that two days in the week of March 4 be observed as "Baby Days," public meetings to be held in Huntingburg March 7 and in Jasper March 8. The subject of infant welfare will be discussed in its various phases by physicians, nurses and social workers. After these talks a general discussion will be invited.

A committee composed of Mrs. William A. Wilson, Jasper; Miss Genevieve Williams, Huntingburg; Dr. H. M. Baker (chairman), Holland, was appointed to draft the programs for these meetings.

After completion of the special business, visitors who wished to leave were excused, and the meeting was continued with a discussion of the case reports of the Massachusetts General Hospital.

Adjourned.

H. M. BAKER, Secretary.

ELKHART COUNTY MEDICAL ASSOCIATION

Meeting of Dec. 2, 1915

The thirty-sixth annual meeting was called to order at 1 p. m. Dec. 2, 1915, by President Haywood in K. P. Hall, Jefferson Building, Goshen.

I. Diagnostic clinic, "Cardiovascular Diseases," Dr. C. L. Grosh, Toledo.

Case 1.—Bad teeth. Good health to one year ago. "Sharp shooting pains" in precordium. Blood pressure: systolic 124, diastolic 68. Arrhythmia of reflex respiratory cause. No primary cardiovascular disease.

Case 2.—M., aged 59, "Break down" ten years ago; sick ever since. Some shortness of breath on exertion; "feels badly all over." Breathes symmetrically. Cyanotic. Cardiac dulness—to right, left border of sternum; above, lower border third rib; to left, nipple line in fifth intercostal space. Apex full and heaving. Rough systolic murmur at apex. Some arrhythmia—is due to "extra systole." Dependency, anemia, early development of sclerosis. Probably has had some rheumatism or bad teeth. If lues, there would be more incapacity, more tissue destruction. Arrhythmia better analyzed by polygraph.

Case 3.—M., aged 65. Marked valvular sound with very little trouble. Has been incapacitated for ten years. Typhoid fever three weeks in 1866; well till two years ago, when he developed vertigo, cough, dyspnea, orthopnea. Edema lower extremities. Nocturia for over two years. Has improved some since last July. Distinction between orthopnea and Cheyne-Stokes breathing.

Case 4.—Typhoid twelve years ago. Dyspnea on exertion. Numbness palms of hands and soles of feet. Areas mapped out functional. Best guide to cardiac sufficiency is what individual can do. This patient does his work—a laborer. Murmur and heaving apex and albuminuria. His is primarily renal form of cardiac disease.

Case 5.—Relatively well till last fall. Weakness, dyspnea, edema of extremities until the last four weeks. Was treated for syphilis eight or ten years ago. Fluid withdrawn from left pleural sac

at that time. No signs of tabes. Long run of low fever. Sputum negative for tuberculosis. Wassermann strongly positive. Blood pressure systolic, 154; diastolic, 120. No doubt systolic was higher than 154 two years ago. Some fluid in abdomen. Mass in liver easily palpated on lying down. Motion of diaphragm observed. Paralysis of diaphragm gives bulging in hypochondrium on affected side—fever probably due to tuberculous infection. Cardiac lesions follow hard work and infections. Warthin has been able to demonstrate the presence of spirochaetes in endocardium, myocardium, and pericardium. Found in nests. Also specific infection of aorta and arterial endothelium.

II. "Life Insurance Examinations," Dr. C. H. English, Fort Wayne. The paper dealt with the problems which the life insurance examiner meets in his routine work.

III. "Differential Diagnosis of Diseases of the Chest by Means of the X-Ray," Dr. James T. Case, Battle Creek. An unusually instructive demonstration with lantern slides of a large variety of chest conditions selected from a wealth of clinical materials.

DISCUSSION

Dr. A. W. Crane, Kalamazoo: Splendid array of roentgen-ray slides. A change is coming over the practice of medicine; instead of fifteen or twenty cases in an afternoon, the practitioner now has five. The reason is found in the matter of diagnosis—diagnosis which will stand the test of the operating and postmortem rooms. The general practitioner should refer his cases to the roentgenologist. In lung conditions, tuberculosis is found in nine out of ten cases—then the tenth case is one of several rarer diseases.

Dr. Stanley A. Clark, South Bend: This demonstration represents a wealth of material. Mentioned points in diagnosis of early pulmonary tuberculosis where some doubt is entertained before roentgen ray is used. Syphilis of lungs—supplement roentgen ray with Wassermann test to avoid errors. Quoted Jordan of London, who sidesteps a little in border-line cases.

Dr. James T. Case (closing): Impossible to show on screen details easily seen in stereoscope. Is able to say, independent of clinician, that certain areas are easily tuberculous. Presence of moisture determined clinically is also proved to be fluid by roentgen ray, especially after tuberculin injection. Jordan has done most of his work for Lane on the intestines.

IV. "Practical Therapeutic Applications of Recent Advances in Our Knowledge of Infections Diseases," Dr. E. E. Irons, Chicago. Proper balance. Susceptibility or nonsusceptibility. Therapeutic measures to affect the equilibrium. Diphtheria and tetanus serum used with exact knowledge of what they will do. Certain percentage of cases of tetanus can be saved by intradural injection of antitetanic serum. Injection of vaccine in typhoid fever (several million dead bacteria intravenously), causes rise in temperature in one hour and then defervescence. Similar leukocytic reaction observed. This same observation, however, made in normal individual. A nonspecific

reaction in contradistinction to the specific examples cited above.

Certain organisms show a predilection to invade certain tissues of the body. Other organisms, as the streptococcus, show no preference. Localization and focal infection. Clinical course depends on the resistance of the body. Then organisms pass from foci into the blood stream with resulting metastatic infections.

An infected scratch of the skin will cause an osteomyelitis or acute septicemia. Recent investigations of infections of the uveal tract show that rheumatic iritis is due to metastatic infection.

Much may be accomplished by autogenous vaccines. Most of the benefit comes before the first infection—from the more thorough study of the case which is necessary to develop an autogenous vaccine.

V. "A Plea for the Prevention of Deformities in the Healing of Burns," Dr. C. A. Parker, Chicago. Bat-wing deformity illustrated. Burns of extensor surfaces do not cause deformity and scars can be overcome. Should get good results in treatment of burns, with no deformity, by proper regulation of position of joints. Fix limbs in certain positions and use plaster of Paris or whatever other appliances with whose use you are familiar. General rule—straight lines during healing of burns. Exception—overextend the arms in burns of axillae.

Uses adhesive plaster directly over the burn, placing it smoothly. It can be applied to the raw surface without pain and removed without pain. It does not stick to the burn. It does not bleed on removal. Antiseptics and no other dressing necessary. Gauze outside of adhesive plaster.

Open air treatment very poor treatment. Keep secretions in. Pus is the best possible secretion to keep on the wound surface. Body tissues are accustomed to taking care of infections. Illustrative case shown on screen.

DISCUSSION

Dr. C. C. Terry, South Bend: Champions open air treatment of burns.

Dr. I. W. Short, Elkhart: Has obtained good results with open treatment. Has to prevent patients from getting fingers under the dressings. Believes in passive motion of joints during healing. Electric burns more serious.

Dr. Mitchell, South Bend: Is it necessary to have leakage of pus? Why not seal hermetically?

Dr. C. W. Frink, Elkhart: Commends use adhesive plaster dressing.

Dr. J. C. Fleming, Elkhart: Uses wire cage. Not good treatment to bind wounds with adhesive. Believes in open treatment of burns. Marvelous how it shortens time of healing. Believes in fixation of joints. Recommends skin grafting.

Dr. Edgar Myers, South Bend: Erysipelas and infection more likely in open treatment. Gauze dressings for first two weeks removed twice a week, then change to open treatment.

Dr. B. F. Kuhn, Elkhart: All open areas must be covered by growth of skin from edges. Used perforated zinc in hospital practice.

Dr. C. A. Parker (closing): Fixation of joints in burns best conservator of motion there is. Refuted

all objections raised to his closed adhesive plaster treatment.

VI. "The Use of Local Anesthesia in Surgery of the Lower Bowel." Dr. Louis J. Hirschman, Detroit. For nearly fifteen years has used local anesthesia in treatment of anorectal diseases. General handling of case as important as giving the anesthesia. Cases are best treated in hospital. Many people continue to suffer because they are afraid of general anesthetic. Many strictures and prolapsi can be done under sacral anesthesia.

Technic of preoperative preparation given in detail. Code of signals and signs used to minimize conversation in operating room. Operative technic given in detail. Operations for hemorrhoids, fissures and fistula illustrated on screen.

DISCUSSION

Dr. J. A. Duncan, Toledo: Recently visited Dr. Hirschman's clinic and witnessed that his work is beautiful.

Dr. A. A. Norris, Elkhart: A disciple of Hirschman.

Adjourned.

At 7 the society entertained its guests with a cabaret dinner at the Alderman Hotel.

Meeting of January 6, 1916

Called to order at 8 p. m. by President Haywood in office of Dr. Fleming, Elkhart. Minutes of December meeting read and approved. Report of Annual Meeting Entertainment Committee read by Dr. Page and all bills as per list were allowed by vote of society. Written charges against Dr. Spohn by Drs. Benham and Elliott filed with secretary.

Motion made and carried that the secretary write a "thank-you letter" to those from outside the county who addressed the annual meeting of this society on Dec. 2, 1915.

Annual election of officers with following result: president, H. W. Eby, Goshen; vice president, S. C. Wagner, Wakarusa; secretary and treasurer, J. A. Work, Jr., Elkhart; censor (for three years), C. W. Haywood, Elkhart; delegate to state society, G. W. Spohn, Elkhart.

Application for membership of J. S. Slabaugh, Napanee, read by secretary and given to board of censors.

Paper, "Diagnosis and Treatment of Bladder Tumors," J. C. Fleming, Elkhart.

Discussion.

Adjourned.

JAMES A. WORK, Jr., Secretary.

HANCOCK COUNTY

Hancock County Medical Society met in the office of Dr. Milo Gibbs in Greenfield, Feb. 10, 1916, and called to order by President Hawk.

Minutes of previous meeting read and approved. Report of Auditing Committee read, approved and committee discharged.

All delinquent members who have paid dues were reinstated.

Resolutions pertaining to mental defectives were adopted.

The board of censors was instructed to interview every candidate for nomination for representative to the legislature relative to his attitude on chiropractic legislation, and the board to make its report in one week.

Dr. E. A. Hawk presented the paper of the evening on "Nasal Obstruction." It was freely and favorably discussed.

Program Committee ordered to complete their work by next meeting.

Officers for year 1916 are: president, E. A. Hawk; vice president, C. K. Bruner; secretary-treasurer, J. L. Allen; board of censors, C. K. Bruner, J. E. Ferrell, Milo Gibbs; delegate, E. R. Sisson; alternate-delegate, S. D. Clayton. Time of meeting, 7:30 p. m. second Thursday of each month.

Adjourned.

JOSEPH L. ALLEN, Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

LYSTERS' PREPARED CASEIN DIABETIC FLOUR.—Milk casein to which has been added a leavening mixture, sodium chlorid and saccharine. Used in the form of muffins in diabetes, etc. Lyster Brothers, Andover, Mass. (*Jour. A. M. A.*, Feb. 26, 1916, p. 653).

ANTISTREPTOCOCCUS SERUM RHEUMATICUS, SQUIBB.—Produced from strains of streptococcus from the joints and blood of cases of rheumatism. The serum is intended for use in cases of acute articular rheumatism. E. R. Squibb & Sons, New York (*Jour. A. M. A.*, Feb. 26, 1916, p. 653).

PROPAGANDA FOR REFORM

HYPOCHLORITES IN INFECTED WOUNDS.—Dakin points out that he claims no credit for the "discovery" of the "new antiseptic." He explains that the "new antiseptic" was discovered by Berthollet in 1788. The solution used by Dakin and others is essentially the well-known Labarraque's solution or solution of chlorinated soda. The claims as to the efficiency of the various modifications which are being used in France and England are decidedly contradictory. The one conclusion which all results with the various hypochlorite solutions appear to justify is that hypochlorites, whether applied in an acid solution, in an alkaline solution or in a neutral solution, are of genuine value in the treatment of infected wounds (*Jour. A. M. A.*, Feb. 5, 1916, p. 430).

OXYBON DECLARED FRAUDULENT.—On January 15, 1916, a fraud order was issued by the postmaster-general against the Oxybon Company, Chicago. The Oxybon was one of the gas-pipe frauds, which included the Oxydonor, the Oxyphathor and the Oxygenor (*Jour. A. M. A.*, Feb. 12, 1916, p. 526).

THE THERAPEUTIC VALUE OF THE HYPOPHOSPHITES.—At the request of the Council on Pharmacy and Chemistry, Dr. W. M. Marriott, Johns Hopkins University, has examined the evidence for and against the therapeutic value of the hypophosphites. Experiments were carried out to determine the "food" value of hypophosphites. The hypophosphites were introduced into medicine by Churchill in 1858 on the basis of an incorrect theory and utterly insufficient and inconclusive clinical evidence; their use has been continued without justification by any trustworthy evidence for their efficiency. By actual trial on human subjects Marriott shows that at least 85 per cent. of the ingested hypophosphites are excreted unchanged. Further he holds that there is no proof that the remaining 15 per cent. is available to the organism. It is doubtful if there are any conditions in which the body suffers from lack of phosphorus. Marriott concludes that there is no reliable evidence that hypophosphites exert a physiologic effect; it has not been demonstrated that they influence any pathologic process; they are not "foods." If they are of any use, that use has never been discovered (*Jour. A. M. A.*, Feb. 12, 1916, p. 486).

THE EFFECT OF OPIUM ALKALOIDS ON RESPIRATION.—D. I. Macht has reinvestigated the effect of opium alkaloids on respiration. He divides the alkaloids of opium in two classes: In the one class is morphine, the prominent sedative alkaloid, which may not interfere with efficient respiration when the dose of the drug is small. In contrast with this are narcotin, papaverin, narcein, thebain and cryptopin, all of which are stimulants and in large doses are excitants of the respiratory center. Codein belongs to the morphin class, though in large doses it may also excite the respiratory center. The action of mixtures of opium alkaloids is a summation of their individual effects. It thus appears that if the object sought is a reduction of the labored activity of the respiratory muscles in a given case, the drug opium itself or mixtures of its alkaloids are to be preferred to morphine alone. If, on the other hand, it is desired to diminish the excitability of the cough reflex mechanism, it seems that a simple substance, as morphine or codein, is to be preferred (*Jour. A. M. A.*, Feb. 12, 1916, p. 514).

FERMENTED MILK.—While there is no conclusive evidence that *Bacillus bulgaricus* is able to establish itself in the intestine in such a way that other bacteria are driven out, it is undoubtedly true that in many cases marked improvement has resulted from the ingestion of milk cultures made from it. It is by no means certain, however, that the results which have been obtained by the use of milk cultures have been attributable to any peculiar virtue in the organism itself. The beneficial effects of a sour-milk diet is attributable, perhaps, not so much to the bacteria contained in the milk as to the milk itself, which provides material for an acid fermentation in the intestine. Fermented milk is so well tolerated in many cases that their use should in general be encouraged from the standpoint of nutrient values, quite apart from the problematical "auto-intoxication" propaganda (*Jour. A. M. A.*, Feb. 19, 1916, p. 574).

DIARSENOL.—Diarsenol (Synthetic Drug Company, Toronto, Canada) is said to be chemically identical

with salvarsan. It has not been examined in the A. M. A. Chemical Laboratory nor do any reports of trials appear to have been published which demonstrate its value or safety. As salvarsan is covered by United States patent the American agents for salvarsan will probably object to the sale in the United States of a substitute (*Jour. A. M. A.*, Feb. 19, 1916, p. 590).

GENOFORM.—Genoform, advertised as a remedy for rheumatism, gout, neuralgia, etc., is marketed with the claim that it is split up in the intestines into salicylic acid, acetic acid and formaldehyd. The statement of composition is too indefinite to permit any real insight into its possible reactions, but even if formaldehyd is liberated in the intestines Genoform could not have the properties which are claimed for it (*Jour. A. M. A.*, Feb. 26, 1916, p. 676).

TANLAC.—Food Commissioner Helme of Michigan reports: "A new panacea for the cure of 'all ailments of the stomach, kidneys and liver, catarrhal affections of the mucous membranes, rheumatism, nervous disorders and the like' is offered to the public under the name of Tanlac. The label on the bottle neatly avoids the pure drugs act by claiming to be only a 'tonic and system purifier.' An analysis of Tanlac in the laboratory of this Department shows the following: Alcohol 16.4 per cent., Glycerin 2.0 per cent., Licorice present, Aloes or Cascara present, Gentian present, Alkaloids (Berberin) trace. The presence of a trace of tartaric acid shows that wine is the base of this medicine. The 16 per cent. alcohol gives it the 'kick' that makes a fellow feel good and ought to fill a long felt want in 'Dry Counties.' Aloes is a laxative. Gentian is a bitter drug, a so-called tonic. If the reader wants to be cured by the Tanlac route at one-fourth the expense, let him get a quart bottle of good sherry wine. Then go to the local druggist and get 1¼ drams of glycerin and 2 drams each of aloes, gentian, licorice and cascara. Mix (if you wish) and you will have Tanlac so near that neither you nor the manufacturer can tell the difference. This formula will give four times the quantity found in an ordinary \$1 bottle of Tanlac"—*Jour. A. M. A.*, Feb. 26, 1916, p. 676.

BOOK REVIEWS

A MANUAL OF HYGIENE AND SANITATION. By Seneca Egbert, M.D., Professor of Hygiene and Dean of the Medico-Chirurgical College, Philadelphia. New (sixth) edition, thoroughly revised. 12mo, 525 pages, with 141 figures and 5 plates. Cloth, \$2.25 net. Lea & Febiger, Philadelphia and New York, 1916.

In this new edition the text has been revised with special care and due attention to the changes and advances of the past few years. The work has thus been brought up to date. The reputation of this work of Dr. Egbert's has been established by the wide popularity of the former editions of his book. That this new revised edition will help to increase the popularity of the book and the reputation of the author is a foregone conclusion.

THE STARVATION TREATMENT OF DIABETES. With a Series of Graduated Diets Used at the Massachusetts General Hospital. By Lewis Webb Hill, M.D., Children's Hospital, Boston and Rena S. Eckman, Dietitian, Massachusetts General Hospital. With an Introduction by Richard C. Cabot, M.D. Second edition. Boston, W. M. Leonard, 1916.

Only a few months have elapsed since the first edition of this book was reviewed in THE JOURNAL. It was pointed out there that the introduction of the starvation treatment of diabetes mellitus was one of the greatest advances ever made in the therapeutics of this disease. The physician who expects to give his diabetic patients the benefit of this new method of treatment must have a good and clear idea of it himself. In this little volume he can get all the data he would need for the successful management of his cases of diabetes with the so-called "Allen" treatment.

PAINLESS CHILDBIRTH EUTOCIA AND NITROUS OXYGEN ANALGESIA. By Carl Henry Davis, A.B., M.D., Associate in Obstetrics and Gynecology, Rush Medical College; Assistant Attending Obstetrician and Gynecologist to the Presbyterian Hospital, Chicago. Cloth, \$1. Forbes & Co., Chicago, 1916.

This little book is dedicated to "Motherhood." The author starts out with the statement that "There is no logical reason why women should suffer during labor." In this idea we agree with him. We would like to see labor made absolutely painless.

In this book the author emphasizes the idea that nitrous-oxid oxygen anesthesia is the method by which to attain the goal of painless childbirth. His argument is based on a study of 154 cases. An experience based on a series of cases of the number deserves serious attention. Any one interested in this question will find in this volume something worth while.

THE TREATMENT OF ACUTE INFECTIOUS DISEASES. By Frank Sherman Meara, M.D., Ph.D., Professor of Therapeutics in the Cornell University Medical College in New York City; Attending Physician to Bellevue Hospital, New York; Consulting Physician to the Mountainside Hospital, Montclair, N. J., and to the Morristown Memorial Hospital, Morristown, N. J.; Associate Attending Physician to St. Luke's Hospital, New York. Cloth. Price, \$3. New York, The Macmillan Company, 1916.

The author states that he has long felt that the subject of therapeutics has been unduly neglected both in the medical school course and in textbooks. His book, therefore, is intended to fill this need. His aim is to present to students and practitioners his ideas of the treatment of the acute infectious diseases. It is, indeed, a thoroughly practical work and quite up to date. The physician will find in this book many ideas and suggestions that ought to be of distinct aid to him in his management of these diseases.

THE MEDICAL CLINICS OF CHICAGO. Volume 1, No. 4, January, 1916. Published bimonthly by W. B. Saunders Company, Philadelphia and London. Paper. Price per year, \$8.

Abt's discussion on infantile lagrippe is in itself worth the price of a year's subscription to these clinics. It is by far the best résumé of this clinical condition known to us at present. More information of a practical nature can be obtained from this clinical talk than from any of our textbooks.

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NINETY PER CENT of the specialists within the circle of our territory in Indiana, Michigan and Ohio are having their glasses made by the *Ft. Wayne Optical Company*. Our work is our best advertisement.

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Hamburger's discussion of primary carcinoma of the liver is splendid. He brings out in his talk everything of importance relating to this disease known at present, and he presents it in the usual interesting and delightful manner.

Williamson's clinic in which are presented three cases of malaria, a case of hemorrhagic pleurisy due to metastatic sarcoma, and a case of trichinosis, makes his clinic one of unusual interest.

Weaver's contribution on the Schick reaction in this issue should be read by everyone not yet familiar with this subject.

The clinics of the other contributors are fully as important and interesting as any yet presented.

Our notice was caught by a typographical error which is rather serious when on pages 703 and 704 the word "Dram" was found where apparently "Gram" was meant.

A reduplication of pages 643, 644, 645 and 646 also caught our attention. Such errors can be avoided by more careful work.

A PRACTICAL TREATISE ON INFANT FEEDING AND ALLIED TOPICS FOR PHYSICIANS AND STUDENTS. By Harry Lowenburg, A.M., M.D., Assistant Professor of Pediatrics, Medico-Chirurgical College of Philadelphia; Pediatricist to the Mount Sinai Hospital; Pediatricist to the Jewish Hospital; Pediatricist to the Jewish Maternity Hospital; Consulting Pediatricist to the Hebrew Orphans' Home; Assistant Pediatricist to the Medico-Chirurgical Hospital and to the Philadelphia General Hospital; Formerly Instructor of Pediatrics, Jefferson Medical College. Illustrated with 64 text engravings and 30 original full-page plates, 11 of which are in colors. Cloth. Price, \$3. Philadelphia, F. A. Davis Company, 1916.

The subject of infant feeding is being brought very prominently before the profession. It is so intimately bound up with the question of infant mortality that it really deserves all the emphasis given to it. Any good practical treatise on infant feeding is, therefore, a welcome addition to medical literature.

In this book the subject is presented in a thoroughly practical way. The subject-matter is very brief, only the essentials being given. Topics allied to infant feeding, including infantile atrophy, rickets, scurvy, vomiting, constipation, diarrhea, spasmophilia, exudative diathesis and pyloric obstruction, are given the attention each of them deserves. The surgical treatment of the last-named condition is discussed briefly by Dr. John B. Deaver.

A TEXTBOOK UPON THE PATHOGENIC BACTERIA AND PROTOZOA. For Students of Medicine and Physicians. By Joseph McFarland, M.D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College, Philadelphia. Eighth edition, thoroughly revised. Octavo of 807 pages, with 323 illustrations, a number of them in colors. W. B. Saunders Company, Philadelphia and London, 1915. Cloth, \$4 net.

This textbook possesses so much recognized merit that it easily earns a place of high rank among books on bacteriology. In fact, a medical book that has gone through eight editions—with frequent reprinting of each edition—and carries the reputation of presenting in each edition the last word that can be said on the subject, requires no commendation from the reviewer. Like previous editions, the present one contains many additions and alterations in the text.

In fact, the author has been so insistent on bringing his work to the highest point of usefulness that he has rewritten the entire book and the publishers have reset the text.

The work has been divided into two parts, the first dealing with the general considerations pertaining to bacteriology, and the second dealing with the infectious diseases and the specific micro-organisms. The chapters dealing with the laboratory methods employed in obtaining, culturing and recognizing the various micro-organisms are sufficiently comprehensive for both practitioner and student, and the description of the specific micro-organisms that are responsible for infectious diseases are especially noteworthy for their clearness and scientific accuracy.

A book on pathogenic bacteria and protozoa is a necessary part of any practicing physician's library, and we doubt if it would be possible to secure any other work that would quite take the place of the volume under consideration, and we unreservedly recommend it as being thoroughly up to date and adapted to the needs of the student and practitioner.

OBSTETRICS. A Practical Textbook for Students and Practitioners. By Edwin Bradford Cragin, A.B., A.M. (Hon.) M.D., F.R.C.S., Professor of Obstetrics and Gynecology, College of Physicians and Surgeons, Columbia University, New York; Attending Obstetrician and Gynecologist to the Sloane Hospital for Women; Consulting Obstetrician to the City Maternity Hospital. Assisted by George H. Ryder, A.B., M.D., Instructor in Gynecology, College of Physicians and Surgeons, Columbia University, New York; Assistant Attending Obstetrician, Sloane Hospital for Women; Associate Surgeon, Woman's Hospital, New York. Octavo, 858 pages, with 499 engravings and 13 plates. Cloth, \$6 net. Philadelphia and New York, Lea & Febiger, 1916.

The author states that he has felt a growing sense of duty to place before the profession the methods used in the Sloane Hospital for Women and in his own obstetrical practice. He has discharged his duty by presenting this new book.

It is a comprehensive work in which the subject is treated so thoroughly that it leaves nothing to be desired. So far as the presentation of the subject-matter is concerned, we do not hesitate to say that this work will more than hold its own in a field already well supplied by textbooks of the highest excellence. However, so far as the arrangement of the subject-matter is concerned, a word of criticism must be offered.

The author has made his chapters too long. A striking example is Chapter VIII, which extends over ninety pages. As soon as one begins to wade through this book his attention is struck by the length of some of the chapters. We cannot help but feel that this is a serious deficiency in a work intended for general men and students.

No mention is made in this work of the treatment of puerperal infection by Harrar's method of intravenous injection of magnesium sulphate. A method of treatment that has yielded clinical results so striking as those reported by Harrar ought to be brought more prominently before the profession.

A typographical error was found on page 623 in the heading "Excess is Resistant Forces" where obviously "Excess in Resistant Forces" is meant.

Intestinal Stasis, Ptosis and Constipation

have assumed today an importance which the medical profession never before imagined. This is because the toxemia which may accompany these conditions, with its train of detrimental results, has been demonstrated, while the fact that cases may be treated successfully by the physician, is recognized.

It has been shown that Ptosis, Intestinal Stasis and Constipation do not necessarily occur together. Each may exist by itself, or any degree of combination of two or all may obtain. The essential matter is to prevent the toxemia by preventing an abnormal delay in the passage of material along the gastro-intestinal tract and by hindering development of bacteria.

The medicinal remedy, *par excellence*, is, by common consent, LIQUID PETROLATUM, *Heavy*, administered early in the case and persisted in until a cure is had, or until it is demonstrated that surgical conditions prevent results.

We therefore wish to call the attention of the medical profession to

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as especially suited to relieve constipation and to prevent alimentary toxemia. It is colorless, tasteless, neutral and non-irritating. It exceeds the quality requirements of the United States Pharmacopœia and the British Pharmacopœia, and is the purest and best mineral oil to be had. It is superior in essential respects to similar products, whether of Russian or American origin.

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**Powerful antiseptic,
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Does not attack nicked or steel instruments; does not coagulate albumin.

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To destroy infecting organisms in skin diseases (ringworm, acne, barber's itch, etc.).

To disinfect surface lesions associated with fetid discharge.

To control the itching of skin infections.

To disinfect the hands after attendance upon cases of communicable disease.

To make solutions for the vaginal douche.

To destroy the odors of offensive hyperidrosis.

To cleanse the hair and scalp.

To remove and prevent dandruff.

To disinfect vessels, utensils, etc.

To wash and sterilize bed-linen, handkerchiefs, etc., used in the sick-room.

♦ ♦ ♦

Germicidal Soap, in short, is useful whenever and wherever a powerful antiseptic, disinfectant, detergent or deodorant is required.

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Next Annual Session, Fort Wayne, September 27, 28 and 29, 1916

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ORIGINAL ARTICLES

THE TOXEMIAS OF PREGNANCY *

CHARLES E. FERGUSON, M.D.
INDIANAPOLIS

It was not in the hope or promise of adding anything new to our knowledge of an important and interesting subject that I present a paper on the "Toxemias of Pregnancy." There is no department in obstetrics more neglected than the prenatal care of the mother and child. There is no subject in this most important field of medicine where our knowledge and our practice are more conflicting.

The great advances in physiology and physics of the cell; the study of colloids and enzymes and ductless glands, and their interaction on metabolism, have convinced us that we have just begun to catch a glimpse of processes and chemical changes undreamt of in our comparatively recent philosophies.

The borderland between health and disease, normal and abnormal conditions, is at all times hard to define. The systemic disturbances due to the presence of the products of conception make every case of pregnancy one of potential disease. Increased metabolism and the increased waste incident thereto throw on the maternal organs an unusual burden. There is much reason to believe that aside from fetal metabolism there is a specific poison or poisons, the direct product of the placenta or chorion. The entrance of this toxin into the placental circulation is met and overcome in normal cases by specific ferments or antibodies, the products of maternal cells or of one or more of the ductless glands. A negative Abderhalden test in a known pregnant woman is significant. The specific ferment

causing the reaction is undoubtedly a protective one, as a majority of eclamptics so far examined confirm this theory. If not overcome or neutralized by these unknown protective bodies, previously present or elaborated for the occasion, certain well-marked pathologic changes take place in liver, kidney and other organs. As a result of impairment of liver and kidney, there is an added source of danger from protein fractions, the result of the impaired function of essential organs. On the presence of protective bodies depends the more or less immunity of the mother to the danger incident to her condition. From the mild, transient morning sickness to the pernicious vomiting of pregnancy there is found every gradation of clinical manifestation. Identical symptoms may conceal such differences in pathology as are found in neurotic vomiting and yellow atrophy of the liver.

The recent experiments of Hull¹ confirmatory of the theory of intoxication from fetal elements in the maternal circulation.

These elements are autolysized with the formation of an excess of leucin. Leucin causes the primary lesions in the liver. The changes in the kidney of eclampsia are late and are probably due to the excess of autolytic products and protein fractions, the result of failure of the hepatic function.

I shall not attempt to catalogue the various theories of the causation of the toxemias of pregnancy. Great as their importance and interest from a medical or scientific view, we have as yet only reached the point where we confess our profound ignorance.

Whenever the symptomatic vomiting of pregnancy becomes uncontrollable by ordinary medication and hygiene, it suggests a toxemia. The symptoms may be due to a variety of causes, reflex, neurotic or toxic. Of the three varieties the reflex is the least stubborn to treatment.

* One of the papers in the Symposium on Obstetrics presented before the Indiana State Medical Association at the Indianapolis session, September, 1915.

Often the vomiting yields to the correction of a misplaced uterus, the healing of an eroded or ulcerated cervix or the removal of an ovarian or fibroid tumor. There is much evidence to justify us in placing these reflex cases in the category of the neurotic. The rapid recovery after the slightest operation suggests a neurotic rather than an organic type. The true neurotic vomiting is akin to hysteria, often yields to suggestion, applications to the cervix, and the use of any kind of electricity. Simple anesthesia has been the apparent cure of many who were in the last stages of emaciation from starvation. Cures have been affected by the threat of the necessity of an abortion, in patients who craved motherhood, and by a futile attempt at abortion in others who did not desire children. A remarkable case of the latter class occurred in a patient under my care.

Unfortunately married, she was much depressed at the prospect of giving a child to such a father. For three months she retained scarcely enough food to keep life in her emaciated body. In spite of all treatment her condition became so grave that after due consultation I determined to empty the uterus. She was then in the seventh month of gestation. Under ether anesthesia I introduced two No. 14 solid bougies into the uterus, avoiding the rupture of the membranes, and kept them in position by packing the vagina with gauze. After assuring her that labor would begin in about twelve hours, I left her for the night in the care of her nurse. On visiting her the next day and learning that she had no pain, I determined to take her to the surgery and introduce some larger bougies. On leaving the room the nurse advised me that she had eaten a good breakfast two hours before. On taking her to the surgery I removed the packing and further evidences of my ineffectual course and without telling her led her to believe that I was still trying to terminate her pregnancy. From that time she rapidly took on flesh and eventually gave birth to a healthy boy, for which she never fails to give thanks to my failure as an abortionist.

It is easy to recognize hyperemesis, but the type is frequently obscure. Often both neurotic and reflex types pursue the same course as the chronic toxic varieties. The symptoms common to all are severe vomiting at all hours of the day, the rejection of nearly all foods and fluids. Excitement, unusual noises, bright lights, sudden movement precipitate paroxysms. If vomiting persists it changes from the mucous bile-stained contents to slightly

blood-stained and ultimately coffeeground varieties. The patient is constipated, the urine becomes scanty and high colored, emaciation continues and the patient passes through collapse to death. In the toxic type marked changes in liver and kidney stamp it as a distinct and definite disease due to profound disturbance in metabolism. The chronic variety is difficult to recognize, while the acute type of the toxic variety is obvious. The sudden onset of the vomiting with the early appearance of bloody or coffeeground vomitus, and early death without emaciation, make the diagnosis. The absolute indication for emptying the uterus makes the recognition of the chronic type imperative if we would save our patient.

Careful pelvic examination, the correction of displacement, removal of tumors, etc., will differentiate the reflex type. We must exclude organic lesions in other parts of the body. Cancer of stomach, meningitis, tubercular meningitis, and drugs taken to produce abortion must not be overlooked. Excluding displacements, tumors, cervical lesions and organic lesions of which excessive vomiting is a prominent symptom, will place the case tentatively in the neurotic variety. If suggestion fails, the rectal administration of chloral and bromids in fairly large doses will often check the vomiting. Isolation of the patient in the care of a competent nurse, who can keep out friends and relatives, sometimes works a complete cure. If improvement does not follow this treatment, or if the vomiting becomes coffeeground in character and torpor and coma appear, we are dealing with the toxic type.

Adrenal insufficiency is an undoubted cause of vomiting in both toxic and neurotic varieties. Five to 10 drop doses of 1:1,000 solution epinephrin every eight hours often produces the most gratifying results. Under proper treatment the prognosis in reflex and neurotic hyperemesis is good. In the toxic type, even in spite of the early emptying of the uterus, the prognosis is grave. Modern teaching condemns the use of chloroform anesthesia in toxic conditions where the essential lesions are in the liver. Under ether or nitrous oxid the uterus must be emptied as soon as diagnosis of toxic vomiting is made.

Nephritis in some form is the best known of diseases related to pregnancy. It is fourteen times more frequent in pregnant than in non-pregnant women of the same age. Two types are recognized: the so-called kidney of pregnancy, and the relapsing kidney of pregnancy.

In the former the symptoms develop in the later months, pursue a subacute course and disappear after delivery; in the other the albumin and casts are found from the early months, disappearing only to reappear in subsequent pregnancies.

In the kidney of pregnancy, a chronic nephritis is aggravated, all the symptoms are exaggerated and hastened. Contrary to earlier teaching, eclampsia is not so common a sequel of chronic nephritis as in the so-called kidney of pregnancy. The nephritis is no longer looked on as the cause of the disease. It is but one of the many manifestations of the toxic substances, in which the kidney shares the damage in common with liver, brain and other organs. In the relapsing kidney of pregnancy eclampsia is rare, although of course the patient is in danger of the other types of nephritis. The subject of chronic nephritis may show but little clinical evidence of kidney lesions. Again, lassitude, headache, disturbances of vision, and edema make the picture one of gravity. Albuminuric retinitis calls for immediate emptying of the uterus, no matter what the stage of the pregnancy. It is mistaking these cases for eclampsia that has made the conservative treatment an apparent failure in the hands of some good men. Red and white infarcts in the placenta so interfere with the nutrition of the fetus that death and expulsion is a common sequel. When these patients pass without warning into coma and convulsions the erroneous diagnosis of eclampsia is made. If, however, there is a rapid diminution in the quantity of albumin after delivery, eclampsia is the proper diagnosis. In renal insufficiency the casts and albumin persist indefinitely, with a tendency toward rapid accumulation of nervous symptoms. Fortunately, the diagnosis is more interesting from a scientific than from a therapeutic standpoint. In the light of our present knowledge the preventive and curative treatment of nephritis and preeclamptic toxemias are identical.

Were women trained to put themselves under the care of a physician in the early weeks of pregnancy the prompt diagnosis of the above varieties of toxemia would be greatly simplified. So long as expectant mothers get no more care than that given by the midwife, or often not as much as that given to a valuable domestic animal under like circumstances, women will die and doctors will struggle with eclampsia and uremia that should have been anticipated and in most cases prevented. The time has passed for the physician to pose as an obstetrician

whose only certificate to distinguish him from the midwife is that he carries a bottle of chloroform, a Kelly pad and a pair of Hodge forceps. Unless the physician is alert and willing to give pregnant women the early attention their condition demands, he should be enrolled among the contented ones of a passing age, the happy company who never saw a torn perineum, nor a postpartum rise in temperature not due to the coming in of the milk.

The urine of pregnant women should be examined for sugar and albumen every four weeks during the first six months, and every three weeks during the last three months. In the event of the diminution of the urine and the presence of albumin, the total quantity passed in twenty-four hours should be measured and the total urea and albumin measured by such simple apparatus as the Doremus ureometer and the Esbach albuminometer. The blood pressure should be taken from time to time, particularly in such patients as show any evidence of toxemia. A sudden rise to 200 millimeters pressure is a danger signal of approaching eclampsia. Every patient should be impressed with the significance of dimness of vision, spots before the eyes, and particularly with the importance of reporting severe pains in the epigastrium. A persistent pain in the head, frontal or occipital, will bring the patient to the doctor sooner than the epigastric one, though the latter is the more significant.

The note of danger sounded by the appearance of the above symptoms must be recognized if we would save our patient from the eclamptic attack that is threatened. While it is true that eclampsia sometimes develops during labor when there has been no warning symptom, the history of a great majority of patients in eclampsia reveals a neglect of the important symptoms of preeclamptic toxemia.

The symptom complex seldom reveals all the above manifestations in a given case. Any one makes imperative the examination of the urine. The amount of urea and albumin found from day to day in a twenty-four-hour specimen will give a fair index to the progress of the condition. The patient should be kept quiet, all meats forbidden, and if possible the diet restricted to milk. Large quantities of water should be drunk, which can be made more palatable and grateful by the addition of 1 dram of cream of tartar to the pint.

The bowels should be kept freely open by salines, the skin active by hot baths, and the body warm by sufficient clothing. In a majority of cases prompt improvement follows treat-

ment. In severe cases nothing but water for a day or two should be given by the mouth, and elimination aided by hot packs. If in spite of treatment the albumin increases and the urea decreases or remains constant, and the headache and pain in epigastrium persists, the prognosis is grave.

In all cases where the albumin reaches 8 or 10 grams per liter, Williams advises interference with the pregnancy. If we wish to avoid eclampsia we must empty the uterus when conservative treatment fails to mitigate the urgent symptoms.

In selecting proper cases for abortion or induced labor we are confronted with the solid wall of our ignorance of the etiology of the toxemia in question. Because we cannot see beyond we sometimes defer active interference in the face of apparent improvement under prophylaxis, only to see our patient suddenly pass into coma or spasm. On the other hand, we may sacrifice some child that otherwise might have come to term and delivered in a comparatively normal labor. Most cases of eclampsia are preceded by some of the symptoms of preeclamptic toxemia. A few cases develop at labor without any warning whatever.

Aside from the premonitory toxic symptoms there is reason to believe that heredity or family idiosyncrasies play an important rôle in the etiology of eclampsia. I have seen a case where the sister of the patient developed eclampsia in a pregnancy seven years before. Twin pregnancies and first pregnancies are important factors in precipitating an attack; the proportion of cases in each is greatly in excess of the average. The attack may occur insidiously while the patient is sleeping, or at the termination of an apparently normal pregnancy and labor. Most attacks appear in labor, but no period after the second month is exempt, nor does an empty uterus guarantee immunity. Spasm may occur in the false labor of extra-uterine pregnancy, and in the presence of hydatidiform mole; the patient may die after one convulsion, and survive as many as eighty. The prognosis is most grave for mother and child. Maternal mortality is from 20 to 25 per cent., and that of the fetus from 35 to 50 per cent.

Some clinical features in individual cases make possible a relatively favorable prognosis. Edema is a favorable sign. It is not the number of spasms, but their frequency and duration of coma that measures their gravity. Low blood pressure and return to consciousness between attacks are good omens. Persistent high blood

pressure and coma are bad. A weak, rapid heart, suppression of urine and failure to sweat under hot packs, presage death. Our prognosis must be subject to qualifications. Postecclamptic insanity, aspiration pneumonia, embolism, edema of the lung, and injuries and sepsis incident to surgical interference find in the eclamptic a welcome host. The child may die before or shortly after delivery, from injury sustained in operating, from morphia given to mother, from the effects of prolonged anesthesia and eclampsia. If the child is born alive it must not be put to the mother's breast until convalescence is assured, or it will surely die. With the onset of the spasm we are face to face with one of the most serious of obstetrical difficulties.

It is most unfortunate that there is no agreement among authorities as to treatment. No matter what is done the attendant is subject to criticism from a large number of eminent teachers and clinicians. On the one hand we have the advocates of extreme conservatism, delaying operative interference and putting their trust in morphia, veratrum and elimination; on the other the advocates of immediate delivery by induction of labor or section, abdominal or vaginal, in every case. Between these extremes it is the wise course to take the middle ground. In the absence of hospital facilities and skilled operators it is the only safe course to take. We may agree with the extremist on one hand, that labor, normal or induced, especially the latter, precipitates many attacks, and hold with the other extreme that the presence of the fetus is the cause of the condition. In common with a rapidly increasing group it is safe to defer interference until we have given conservatism a trial. The good results obtained in four cases of antepartum eclampsia, at seven and eight months, have made me partial to the treatment before term. Four living mothers and their living children born at term, without the appearance of the much-dreaded and anticipated spasms, make me partial to conservatism, so long as the patient responds to the treatment.

Dogmatism has no place in the treatment. Every case must be studied on its own merits. In a recent case the patient at eight months, primipara, 34 years of age, persistent high blood pressure and coma, was seen in consultation. A long, rigid cervix that promised infinite resistance and delay in dilating prompted me to advise Cesarean section. The recovery of the patient justified the operation.

If spasm occur at the onset or during labor it should be our endeavor to empty the uterus as quickly as consistent with the safety of the

patient, the kind of operation depending on the skill of the physician and the surroundings of the patient. If spasm occurs before viability, conservative methods should be tried until it is certain that improvement is impossible. Labor may be induced by packing the cervix with gauze, or by the introduction of solid bougies into the uterus; as soon as sufficient dilatation has occurred for extraction of the body the head should be perforated and the fetus extracted.

In private practice, at or near term, puncture the membranes, partially dilate with hydrostatic bags, and complete the dilatation by the hand or hands, using great care that the cervix is not torn. Deliver with forceps when head engages, by version if head is not engaged. Do not attempt to apply the forceps to the floating head. If labor is progressing and head is advancing, delay the application of forceps until the necessity for the high application has passed.

PAINLESS CHILDBIRTH*

LOUIS BURKHARDT, M.D.
INDIANAPOLIS

The question whether it is advisable to eliminate suffering completely in childbirth, or whether a woman may be expected to submit to a certain amount of pain is still discussed freely in the scientific as well as in the secular press. About a year ago we read the pronouncement of our best known men in obstetrical practice condemning and disqualifying the use of the remedy producing the so-called "twilight sleep," on the ground that when once introduced into the body of the patient it would expose both mother and child to considerable risk, and would be hard to combat on account of the character of the mode of administration. On the other hand, a large body of New England women formed a society whose purpose it was to approach expectant mothers and to induce them not to trust themselves to the care of any physician unless he promised that he would safeguard her against the pangs of childbirth by the use of the famous Freiburg treatment. The public at large was led to believe that so far American physicians had been incredibly obtuse to the sufferings of women in childbirth, and that there were no means too drastic by which it could be brought home to

them that they had to change their methods or lose part of their clientele.

There is not a man in this house, I am sure, who in his practice of obstetrics during the last three decades has not done his utmost to help his patients along with all the means at his disposal to relieve their pains, safeguarding, however, the mother's and the baby's lives as the first consideration. I have read a note in the papers in which the said New England Society complains bitterly that they do not meet with the expected support from the suffering sisters, and I know that after a long, careful, and conscientious trial of the so-called "twilight sleep," the men who were so strongly opposed to it, today admit that in properly selected cases the method has its decided advantages over other methods producing anesthesia. So we may say we have drifted into a safe course which permits us to put the matter before our patients in an unbiased way, and as a rule enables us to convince our patients that whatever method we propose to employ, suffering will be reduced to a minimum. We certainly do not consult our patients in other lines of our work about the kind of drugs we want to use, but we make our diagnosis and tell our patients that we are going to carry out our treatment in a certain way.

Looking backward over the last few years the preferred drug for obstetrical anesthesia was certainly chloroform, which was given as a rule toward the end of the first stage and all through the second stage. Most of us were satisfied with the amount given, an amount sufficient to produce the so-called obstetric anesthesia. That means enough at the beginning of each pain to cut off the edge of the pain, the patient being permitted to regain full consciousness between successive pains.

It is but natural that with such a small amount of the anesthetic very few accidents due to chloroform are reported. In fact, owing to the altered anatomic conditions at the end of the pregnancy, the tolerance for chloroform seems to be considerably greater in obstetrical cases than in the average surgical cases. So much so that many physicians do not hesitate to turn over the administration of the chloroform to a trustworthy nurse or even a member of the family during the expulsion state. Then a sudden demand for an increased amount is created and safety limits are often disregarded to the disadvantage of the patient. A large number of chloroform deaths due directly to excessive administration of the drug have been reported during the last few years. Acute toxemias, however, eclampsia in subsequent pregnancies,

* One of the papers in the Symposium on Obstetrics presented before the Indiana State Medical Association at the Indianapolis session, September, 1915.

in short, degenerative changes of the liver have been charged to chloroform, and its use has been greatly reduced, maybe sometimes decidedly to the disadvantage of our patients.

If chloroform is objected to on account of its consequences, ether has its drawbacks on account of respiratory disturbances caused by prolonged administration. One of the objections to ether, of course, is the excitation stage through which the patients frequently have to pass and which renders the preservation of an aseptic operation field almost an impossibility. A number of disadvantages have been overcome in the apparatus devised by Morgan in Chicago, which permits considerable reduction in the quantity of the anesthetic used. A careful mixture of air and ether vapors offers the possibility of administration by the patient herself.

The most valuable addition to our anesthetics has been nitrous oxid gas mixed with a certain percentage (5 per cent.) of oxygen. The narcosis is sufficiently profound to deaden the pain without interfering with the progress of labor, and without any after-effects other than the well-known state of hilarious satisfaction in the patient. The one objection that might be raised is the one I suggested about ether, that the patient gets into a state of excitement in which she is apt to interfere with the asepsis as well as with the possibility of doing any quick and effective operative work. The bulkiness of the apparatus has been overcome to a large extent by the well-known device of Dr. Guedel. The high price of the apparatus renders its general application somewhat impractical.

Local anesthesia in the form of cocainization of the cervix, or the injection of novocain into the pudic nerve have been recommended only to be discarded shortly after. The introduction of cocain, novocain or stovain into the spinal cord, or into the spinal canal as lately recommended, have quite a number of advocates. I myself have seen the administration of cocain into the spinal canal by Babcock of Philadelphia, and I feel that where the procedure is controlled by a skilful operator it certainly anesthetizes the lower part of the body completely without interfering with the functions of the affected area nor causing any discomfort to the patient during or after its administration. The operator uses the difference in specific gravity between the spinal fluid and the solution of the drug to determine the segment of the spinal cord to which he wants the drug to rise. He elevates the body of the patient gradually and tests the area of anesthesia which has been

reached in order to get a more or less complete anesthesia of the parts below.

The most extensively used and probably least-mentioned anesthetic of all is morphin, and it is sure to hold its place for a long time to come, particularly during the first stage of labor. It might prolong the opening period to a certain extent, but certainly in cases where for physiologic reasons a protracted opening stage is to be expected the opiates give immediate relief. Complete relaxation secured by the administration of an opiate in the interval between pains allows the patient to recuperate to such an extent that the incidental slowing up is decidedly compensated by the better work done after the patient has enjoyed a rest.

The ideal relief, however, seems to some to have been secured by the introduction of the hyoscin group among the obstetric anesthetics; certainly an element previously not thought of has been added. This remedy causes complete forgetfulness of pains endured by the patient, so that she is not afraid of the pain to come. Beyond this stage of amnesia the drug ought not to be pushed. It is not proposed to use hyoscin or scopolamin as anesthetics. If the patient suffers too intensely then we would rather use some of the gaseous anesthetics in addition, but not push the hyoscin beyond safe limits. This holds particularly good in the second stage of labor, where almost invariably I have used chloroform, ether or nitrous oxid during the expulsion stage. Owing to the general tendency to reduce as much as possible the amount of scopolamin and hyoscin, the memory of individual pains may not be completely effaced. But our ultimate aim is secured if after the whole labor is finished the patient has no recollection of the experience.

I have had a number of cases under observation where the patient remembered pains and other instances of labor for a short time after they had occurred, but where the memory was an absolute blank concerning the labor as a whole after she had been returned to her room. This proceeding improves, of course, the chances of the baby in whose interests most of the objections of the "twilight sleep" have been advanced. In the majority of cases the patient retains enough consciousness to respond fully to questions put to her in a sufficiently emphatic manner, so that the physician feels that he is not losing control over the mind of the patient.

At present it is an open question with me whether with proper assistance "twilight sleep" is not as well administered in a home, where

we can control outside influences, as in the average public hospital, which certainly is not an ideal place for restfulness and absence of noises. If we want to use this method to the best advantage in a hospital we must have at our disposal a separate room remote from all outside disturbances.

Any major or minor obstetrical operation, of course, can be performed while the patient is in the somnolent state, as an addition of the gaseous anesthetic is needed anyhow. I do not think the use of scopolamin sufficient to secure anesthesia during which to apply forceps or perform version, would be justifiable, where a few whiffs of gas would put the patient fully under control. Finding that the patient has a disposition to get very much excited, I usually discontinue the hyoscin or scopolamin and depend on morphin or gas. A longer acquaintance with the method may render me more assertive about its use in such cases; but as the discussion still going on has considerable animosity about the dangers connected with the use of scopolamin, I hold back in many cases where I could safely push on.

So far I have not had a single accident that I could credit to the effect of scopolamin or hyoscin. The claim that labor pains are less vigorous or less effective is not borne out by my experience. I remember, for instance, an incident in Dr. Edgar's clinic in New York where a patient in the midst of strong first stage labor pains had received the opiate and scopolamin and was presented to the clinic. Dr. Edgar, discussing another case, repeatedly called the attention of the class to the fact that the pains evidently had stopped completely, but just before the class was dismissed, without any warning from the patient, the head was shown to be ready for delivery. The patient evidently does not feel the gradually increasing pain. The observer might notice the lifting up and contracting of the uterus, and the slight moaning might be the only expression of discomfort, but with all of it the patient has a strong and effective labor pain.

About the dangers to the mothers, opinions differ widely. Some claim that the number of cervical and perineal lacerations is greatly increased, while others claim that the number is considerably reduced. Postpartum hemorrhage is mentioned as occurring more frequently. This, however, does not coincide with my personal experience.

A large number of babies do not react immediately to the stimulus of carbondioxid on the respiratory center when born. That means they

are apneic and it is important to keep in mind the difference between this apnea and a true asphyxia. The reflexes are not abolished, but are sluggish. A close observation of the baby shows barely perceptible respiratory movements, which after long intervals are increased to slight gasps. The child has good color; is neither blue nor white but seems to be perfectly satisfied to keep on sleeping.

Many of the secondary disturbances charged to the effect of scopolamin might be accounted for by resuscitating manipulations carried too far.

The frequent examination of the fetal heart sounds during the last stage of labor must be insisted on. I am satisfied that the timely use of a dose of pituitrin has helped avoid prolonged cases of apnea. Beyond the tendency of the children to sleep a great deal during the first days of extra-uterine life I have not noticed any effects of the treatment on the child. The satisfactory mental attitude of the mother toward labor, if you might call it the happiness with which she was carried over the dreaded period of childbirth, has been one of the strongest incentives to popularize this method.

If you ask me to express in a few words the position taken by myself I would like to give the answer I make to patients who request "twilight sleep." I am in favor of "twilight sleep" in cases in which good results seem assured, and they seem to be assured in about one out of three or four cases. I promise to take you through labor with as little suffering as is consistent with the safety of yourself and the safety of your child. If "twilight sleep" is the best method to secure such a condition you may have "twilight sleep." If I feel that other methods are preferable, then I reserve the right to use them according to my best judgment.

THE CESAREAN SECTION IN CONSERVATIVE OBSTETRICS *

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From the earliest records of medical history up to the seventeenth century the cesarean section had one indication, that of obtaining a living child from a dead mother. Succeeding this period the operation was done when with-

* One of the papers in the Symposium on Obstetrics presented at the Indianapolis session of the Indiana State Medical Association, September, 1915.

out it the mother's life would have been sacrificed. This (owing to the excessive mortality rate) the field of the absolute indication for the operation was the only sphere of its usefulness until the year 1880. For centuries, therefore, the relative field was of limited development. Yet when greater experience and modern methods in surgery rendered the operation progressively less dangerous, its field of usefulness was proportionately increased. Much more was this true in so much as the greatest competitive procedure was that of embryotomy on the living child. This operation—this infant sacrifice—to some religiously abhorrent; to all morally shocking—was the one means of salvation of the mother! The revolt against this in favor of the other alternative; the choice between this 100 per cent. infant sacrifice and almost 100 per cent. infant salvation; between the former prohibitive maternal toll and the legitimate 6 per cent. rate of today: is a very natural result of humane intent and scientific sense.

It is our intention to consider only this relative field; the field occupied by the so-called "border-line cases"; the sphere of competition with other methods of artificial or operative delivery.

What are "border-line cases"? What constitutes the competitive field of this operation?

First and mainly: Obstruction to labor.

1. Relative disproportion between the size of birth canal and fetus.

2. Abnormal presentations.

3. Abnormalities of the birth canal other than disproportions of size; that is, neoplasms, malformations (double vagina, atresia), etc.

4. Absolutely unfavorable presentation: (a) Impacted face (mento. post), (b) shoulder.

Second, Toxemias: (a) Eclampsia; (b) Hyperthyroidism.

Third, Placenta previa or "concealed hemorrhage" (abrupt placentae).

Fourth, Rupture or threatened rupture of the uterus.

Fifth, Other emergency conditions wherein prompt delivery is indicated and the possibility of successful natural delivery is doubtful, that is, prolapse of cord, heart disease, etc.

Relative proportion in labor may be due to either:

1. An average child and a moderately contracted pelvis.

2. An average pelvis and a large child. The degree of disproportion being the same the

amount of dystocia is greater in the cases of overdevelopment of the child.

I do not agree with the many authors who state that "Provided the pelvis is not contracted it is very exceptional for a child weighing less than 11 pounds to give rise to dystocia by its mere size." We see many undersized women whose bony pelvis is normal and whose musculature is under par—and conversely heavy muscled large women with pelvis in normal range but with heavy bones and inelastic soft parts offering marked resistance who develop dystocia because of relative oversize of the passenger though somewhat under 11 pounds, and even under 10 pounds.

ETIOLOGY

1. Carrying past term. The over term fetus has an oversized head, with bones harder and shaped square, making it considerably less moldable.

2. Multiparity or elderly primipara.

3. Heredity. One or both parents large; oftentimes, unfortunately, in small women with large husbands or whose husbands have large heads.

DIAGNOSIS

1. Overdistention with its consequent symptoms:

Pendulous belly, dyspnea, feeling of heaviness, edema, albuminuria, etc.

2. Delayed labor: simulated by false pains for weeks, causing great annoyance to mother.

3. (a) Failure of engagement in a primipara before labor. (b) Malpresentation in multipara, that is, face brow or transverse. (c) History of earlier difficult deliveries, age and interval since last child is also an important consideration in these cases.

4. Cephalometry: Size of the fetus is of as great importance as that of the pelvis.

The degree of disproportion must be determined in a practical and systematic manner. Accuracy of examination and measurements. Painstaking pelvimetry should be done in every case of confinement. Careful palpation of the head and, if necessary in order to rule out disproportion, cephalometry (and this may be done with the ordinary pelvimeter) should be done in every doubtful or suspected case. "The time is undoubtedly coming when the general practitioner, the midwife, and even the patients themselves, will understand the importance of correct pelvic measurements so that these border-line cases may be recognized in time to pre-

pare for them, but that time is still a long way off, especially in large country districts and in the small cities and towns where there are no maternity hospitals or specially trained obstetricians, and in many instances where the physician sees the patient for the first time after labor has begun." These "border-line" cases should have the "test of labor" in order to determine in the most practical way the possibility of successful natural delivery. If, as most frequently occurs, the head remains unengaged at the end of first stage of labor, place the patient in the Walcher position; this failing, attempt a Von Müller impression under anesthesia in order to accomplish engagement of the head.

Müller grasps the brow and occiput of the head from above through the abdominal wall, and presses it firmly downward and slightly backward into the axis of the pelvis. When this is done the fingers in the vagina, tracing the margin of the pelvic inlet on the head, can estimate the degree of disproportion. Kerr's modification may be used, the thumb above the pubis measuring the degree of overlapping.

It is here that I desire to emphasize the necessity of improvement in the practice of obstetrics by the general practitioner. Dr. Bonifield tells a story of an ambitious young practitioner who called him in the middle of the night to assist him in a cesarean operation, explaining that the woman was a relative and a case of importance to him, etc., and apologizing for having to call him out at such an hour on such a mission, etc. Bonifield's examination revealed that the patient was not pregnant at all!

Many of us know to our sorrow what the results are in the hands of the unskilled and in unfavorable surroundings. The children are apt to be born dead or they are severely injured. The mothers who survive (there are many who do not) are made invalids for the remainder of their days in too many instances. How frequently we meet in our practice the woman with retroversion or prolapse, with "lumbago" or "suboccipital neuralgia"; with constipation, indigestion; with enteroptosis or who are "nervous wrecks". Yet prior to the birth of the child they had the right to look forward to a strong and healthful existence. Given a case of intestinal obstruction or similar critical surgical condition, and the medical and lay public is educated to such a degree that the practitioner who allows this condition to drift on unduly, and if he be not a surgeon,

does not seek surgical council, and prompt operation where necessary, surely and justly lays himself liable to unfavorable criticism.

Should not the same condition obtain regarding difficult obstetric cases? A degree of mortality and traumatism must ever be associated with childbirth. It is our duty to reduce this death rate and injury to the minimum. This calls for better obstetric teaching, a greater willingness to break away from old methods which have been found wanting, a willingness on the part of those of us who have not been adequately trained to recognize our limitations. Let us, above all else, remember that time and the method of vaginal interference or the absence of such interference are very important factors in determining what the outcome of a difficult labor shall be.

The general practitioner must understand that the possibility of spontaneous birth is in direct proportion to the size of the pelvis, and compressibility of the fetal head.

PROGNOSIS

(a) A child weighing less than 11 pounds is said to be fair for mother but less so for the child. This is due to the frequency of head injuries, for instance, fractured skull with apoplexy or compression and convulsions, paralysis, idiocy, or death.

(b) Spontaneous delivery occurs in 85 per cent. of first degree contracted pelvises, but second degree cases are much less favorable. The results are not different in relative disproportion of the same degree in a normal pelvis—particularly in a primipara.

TREATMENT

(a) Induction of premature labor may be considered in a multipara with a history of a stillborn child or marked dystocia.

(b) If a patient be apparently a few days past term, examine her every two or three days to determine the development of disproportion. This appearing induce labor. Disproportion is determined by (1) complete palpatory examination, including measurement; and (2) head not engaged, Müller impression must be tried. And here I desire to emphasize the fact that this test of disproportion should precede the test of labor in all suspected cases.

(c) Patient apparently two or three weeks past term, induce labor, especially if a multipara with previous history of dystocia. It is almost superfluous to note that any malpresentation—and they are frequent in these condi-

tions—should be properly corrected, where possible.

(d) Labor having begun, an early determination of disproportion should be made in order that the favorable time for Cesarean section shall not have passed and a less favorable alternative have become necessary. This means great care and watchfulness so that if at the end of the first stage there is no engagement, especially if the head overlaps the pubis, cesarean section or pubiotomy may be determined on.

(e) If the condition be recognized too late for cesarean section (for instance, many questionable vaginal examinations, uterus a long time dry, etc.) expectant treatment in marked degree should be employed.

This is too often the case. Here the general man should improve. For it is in these cases that craniotomy becomes the only alternative, whereas earlier recognition of the condition and aseptic care would have saved the life of the infant by pubiotomy or cesarean section. These patients should have the advantage of the modern aseptic environment, whether in the home or in an institution, and this environment depends on the proper care of the attending physician. Let him give the test of labor if patient is seen in time in the Walcher position, and, if this fails, make an attempt to engage the head by Von Müller impression under anesthesia. Some authors claim the same advantage for the exaggerated lithotomy position that is gained by the Walcher, obtaining a change of axis of the pelvic inlet to conform to the direction of the child. This is well worth a trial, inasmuch as it is a much more tolerable position for the patient than the former.

What of the use of the high forceps in these cases? Every one of us of extensive obstetrical experience has observed the frightful misuse of this most humane instrument, the obstetrical forceps, "by Herculean attempts at impossible deliveries" on the unengaged head, for instance, the high application.

Zinke has said "the high forceps should be relegated to the past; not even the skilled, experienced and well-trained obstetrician is justified in their use if patient is free of sepsis, in aseptic surroundings and if he knows how to make cesarean section."

DeLee has said that "high forceps constitutes the conscience operation before perforation."

Dr. Davis of New York has remarked that "it is one of the most dangerous operations we have anything to do with."

I believe that the dictum that the unengaged head is a contraindication to forceps, when

fully accepted by the general practitioner, will have done more to save life and prevent morbidity than any one rule governing obstetric practice. Here permit me to cite three illustrative cases.

CASE 1.—Mrs. L., primipara, aged 30, cared for by me during pregnancy. Pains began May 13, 1912, with an apparently large fetus in R.O.A. position. After slow first stage with dilatation complete there was no engagement. I ruptured the membranes and placed her in the Walcher position. The position was intolerable to her and I attempted a Müller impression under anesthesia in vain. Cesarean section was then determined on and a female child, weight 10-6/16 pounds, and living, was delivered. Recovery uneventful.

CASE 2.—Mrs. H., aged 36, primipara, history about as the above case; in the care of Dr. J. E. Hoover at the Methodist Hospital, July 9, 1915. After failure of engagement with complete dilatation the doctor attempted a high forceps operation with only a half-hearted hope and therefore tentatively. He summoned me and a cesarean section was done, male child, living, recovery uneventful. An alcohol gauze pack was placed in the uterus here because of the intra-uterine manipulation in application of the forceps.

CASE 3.—Mrs. Y., aged 42, fourteen para, City Hospital, Dec. 30, 1915. History of thirteen instrumental deliveries—all the children living. Had been in labor three days. Twenty-four hours previous to her admission to hospital a cephalic version had been done. Membranes ruptured at this time. On the day of admission an attempt at delivery with the forceps had been persevered in for over three hours under chloroform. I saw her at 8 p. m. Examination revealed a marked disproportion because of both factors; a first degree contracted pelvis and a markedly overdeveloped fetus—literally filling her belly. Mother "in shock," temperature 106.8, pulse 160±, at times imperceptible at the wrist. Child heart rate 180± and irregular. I deemed both patients—and we should never lose sight of the fact that we are dealing with two lives—I say, I considered both moribund and decided to operate only as one would on a dying or recently dead woman with a living child, though here we had not even that incentive. The child was delivered by cesarean section, weight 14 pounds. It was white and very weak and only lived two hours. Examination disclosed a cranial fracture. Panhysterectomy, including of course double salpingo-oovarectomy, was done in order to eliminate the atrie of sepsis in the mother. She made an ultimate, slow, though not stormy, recovery.

I believe the elderly primipara should ever be considered a candidate for operative delivery and that the tentative careful test of labor should be so carried out as to preserve favorable conditions for the cesarean operation in the event of dystocia. I believe the operation should be given the preference in these elderly women, even though the head be engaged if good labor pains have failed to advance it, for such conditions indicate the necessity of too great traction for safety to either the baby or the mother.

Contrast, if you please, the traumatism to the anterior wall of the abdomen by cesarean section with the injury to the dependent wall, the floor, the foundation or support of the abdomen by forceps delivery in these cases, with its consequent invalidism, and find in this contrast, if you will, the reason for my belief. Is not conservatism that method which produces the greater number of live babies and the lesser amount of morbidity to both mothers and babies?

Hebosteotomy or pubiotomy are operations favorably considered by many and condemned by others. The morbidity of the procedure as evidenced by injuries to the urinary tract and by infected wounds, as well as the fact that it is certainly contraindicated in primiparas, have prevented my making it an operation of choice. Dr. Davis of New York has never done the operation. Having had no experience with it myself I shall dismiss its consideration without further comment.

We turn now to a brief consideration of the toxemias:

1. Eclampsia.

A study of 500 cases in German clinics showed that convulsions ceased in 72 per cent. after delivery. This is the basis for the conclusion that immediate delivery is the rational treatment. By rapid delivery the mortality of this disease was reduced by Bumm from 30 per cent. to 14 per cent. (and to 2.5 per cent. by early selection); by Zweifel from 32 per cent. to 15 per cent. (and to 6.5 per cent. after only one convulsion); while DeLee had a maternal mortality of 18 per cent. in all ways, and favors cesarean section in appropriate cases.

From another source I learn that in 245 cases of eclampsia, where there was no sepsis or very little chance of it prior to the abdominal cesarean section, the maternal mortality was only 24 per cent. It was significant that in fifty cases where operative procedures preceded the cesarean sections the maternal mortality was 48 per cent. the difference in mortality

being due not to eclampsia, but to the sepsis superimposed upon the eclampsia. This condition could be avoided once this relation of sepsis to cesarean section were fully comprehended by the general profession.

The results of abdominal cesarean section for eclampsia, so far as the fetus is concerned, should have been, and as a matter of fact were, gratifying in the 245 cases. In a series of cases since 1900 where the fetal statistics could be studied, the fetal mortality was only 5.5 per cent. in 132 cases where the sections were performed after from one to five eclamptic convulsions. On the other hand, we read the claims of Stroganoff, who reports a maternal mortality of 5 per cent. and a fetal of 6.5 per cent. Though these results are not generally accepted by the American profession, yet the weight of evidence from abroad is worthy of consideration.

Surgical measures—incision of the cervix; manual dilatation; or dilatation by instruments or bags; vaginal cesarean section (a mere specialized form of incision of the cervix), or the abdominal cesarean section—any and all of these are dangerous and productive of untoward results in the hands of the surgically untrained!

The narcotic method of Stroganoff will give far better results than any of these in such hands and is to be recommended when specialist and proper environment are not at hand. The technic of the method I shall not discuss.

By most American obstetricians it is still generally believed that prompt removal of the cause—products of conception—is the rational means. A. B. Davis did fourteen operations for this indication in a series of 147 cesarean sections, twelve in primiparas, one in secundiparas, and one in tertiparas.

Cesarean section is indicated certainly in primipara early in labor or before labor has started. Illustrative of this indication I shall briefly report the case of Mrs. H., aged 24, primipara, referred to me by Dr. Charles Morgan. She had had four convulsions, was semi-comatose and had no dilatation. Before ready for operation she had three more convulsions and was in coma. Her recovery and that of her baby was uneventful after cesarean section.

2. Hyperthyroidism.

Concerning this manifestation of toxemia, I desire merely to report briefly an illustrative case:

Mrs. S. K. E., aged 28, secundipara, four months pregnant, referred to me April 12, 1915, by Dr. J. A. MacDonald, with a diagnosis of

acute hyperthyroidism and slight albuminuria. Examination verified the diagnosis. Pulse 120, blood pressure 116, diastolic 80. After rest in bed three months with no improvement in heart condition and an increased weakness a cesarean section was done at the Methodist Hospital five weeks before term and a living child, female, 4½ pounds, was delivered. I merely cite this case briefly as an illustration of this unusual indication.

PLACENTA PREVIA

There is an almost overawing literature on this greatly mooted question in the last few years and time shows as yet no abatement of hostilities which might indicate a speedy solution of the all too perplexing problem. The cesarean section as a method of choice is condemned by such authorities as Schwartz and Schanta and advocated by such as Zinke, Zweifel, Bumm), et al. Schwartz, reporting a small number of cases delivered by bags, etc., excluding the cesarean section altogether from his work, shows a maternal mortality of less than 2 per cent. and a fetal mortality of 40 per cent. I quote the following comment on the report:

"It will be seen, then, that in this series the maternal mortality is cut down by about two-thirds of the usually accepted mortality, whereas the fetal mortality is cut almost in half. While the number of cases is too small to more than point the way, we believe that the indication is clear, and that when we encounter a primipara with a placenta previa either marginal or central, or a multipara with a central placenta previa in either case where the cervix is rigid or undilated, whether or not there is pelvic disproportion, provided the child is viable and the mother offers the ordinary safe operative risk, that cesarean section holds out a better chance of saving the lives of both mother and child with fewer complications than any other method of delivery, always provided that the operation is performed by a competent and experienced operator and amid suitable surroundings."

How repeatedly harkened back to "surgically trained," "hospital," "trained nurse," etc.! While in most of these cases the so-called obstetrical methods may be successfully used, for example, ruptured membranes, metreurynter, podalis version, etc., still we cannot foretell the outcome and the patient should be in a hospital environment.

To my mind a primipara with a placenta previa, no dilatation or slight, and cervix rigid, presents a positive indication for the operation; likewise a multipara with a central implanta-

tion, bleeding marked and cervix rigid from scars, etc. Any case of placenta previa complicated by relative disproportion or an unfavorable presentation also constitutes an indication.

The crux of the question in these cases is the state of dilatation or dilatability of the cervix. Attempts at manual or any artificial dilatation of the cervix usually result in greater or less injury to the wall accompanied by dangerous hemorrhage, particularly in the cases where the wall is relaxed and succulent as a result of the pathologic placenta implantation.

Abruptio placentae may be said to present the same considerations as placenta previa. Rarely hysterectomy becomes necessary in these cases when bleeding persists to a threatening degree in spite of all efforts.

An analysis of the reports from many of the largest European clinics has shown the mortality of both patients, in the clinics where tentative labor was followed with supplementary cesarean section or hebosteotomy, to have been one-third that found in the clinics where the older so-called obstetric methods were used in disproportion or contracted pelvic cases. We cannot estimate the reduction of morbidity. This, then, is the ever-increasing scope of the cesarean operation—the field of its relative indication.

Though to demand that the cesarean section be considered in all cases of difficult or complicated labor were extreme, yet is it not reasonable to desire that its possibilities be not ignored in any?

Have not all of these "border-line cases" a right to that care which shall avert the resort to surgery if possible, but on the other hand preserve the conditions which shall enhance the results of surgery when it is indicated?

THE EFFECT OF TOXEMIA OF PREGNANCY ON THE NEW BORN*

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Eugenics, or the well-being of the race, is now one of the prevailing instincts of our generation. In these days of a lessening birth rate, nations are waking up to the realization that the potential mother and her unborn babe, as a national asset, is of increasing value and is worthy of every care and consideration.

* One of the papers in the Symposium on Obstetrics presented before the Indiana State Medical Association at the Indianapolis session, September, 1915.

We hear much nowadays of the endowment of motherhood; and the chief aim of all endeavoring to endow motherhood should be to give every mother an assurance of security and well-being during the crucial period of pregnancy, labor and the puerperium, and reasonable assurance of being rewarded for her sacrifice by the possession of a healthy child.

The toxemias of pregnancy are perhaps the most lurking and dangerous enemies which threaten this realization, and it becomes the privilege of the branch of medicine which this Society represents to recognize and eliminate this enemy.

The medical profession is becoming more keen and efficient in this endeavor, as is proved by the fact that the literature on this subject is of comparatively recent date and is daily including a wider scope.

It was not long ago that "toxemia of pregnancy" suggested and meant only the fulminating form; but today we include the effect of chronic disease or malassimilation. It is not the intention of the writer to go into detail concerning any of the special forms of toxemia, but to consider all in a general way, giving consideration first to the acute form and then to the chronic form.

By the acute form of toxemia let us understand the patient who within ten to fourteen days after apparent health, or near-health, manifests the symptoms of eclampsia, with or without convulsions, in whom we find headache, epigastric pain, anorexia, vomiting, amblyopia, amaurosis, mental excitement or stupor, dizziness, muscular twitching, edema, high blood pressure, albuminuria, casts and relative suppression of urine, either all or a group of these symptoms sufficient to establish the case.

It has been frequently assumed that the child in this instance is overwhelmed by toxins and succumbs to these. This, however, is the result in but a small percentage of cases, and this will be lowered when the importance and possibilities of prenatal care become more generally recognized.

Most authors content themselves with the assertion that from 40 to 60 per cent. of children born under these conditions die, but the cause of death is not given. The causes of death here are¹: first, prematurity; second, asphyxiation by repeated convulsions of the mother with prolonged cyanosis and possibly placental detachment; third, drugs (morphin, chloral, chloroform) administered to the mother to con-

trol convulsions; fourth, injuries sustained in the forced delivery; fifth, the effect of the toxemia, which is but 6.5 per cent.² of all fetal deaths.

For the present we will give consideration to the fifth group and to the children that survive the prenatal effect of the toxemia.

It is not unusual to find the child has perished when symptoms of toxemia become marked either before or after development of convulsions, and yet frequently the child survives repeated convulsions of either rapid succession or of several days duration with varying intervals, one child being reported which survived 140 convulsions of its mother. As in all forms of distress, the child here early struggles violently, then becomes rather quiet and unresisting; the heart beat is slow, irregular and faint, and finally disappears. This, however, does not necessarily establish the death of the child, as very often the child with the most feeble heart beat can be revived by the established methods of resuscitation, giving special attention to the part most commonly neglected, namely, maintaining body temperature.

Commonly, the child delivered at term during acute toxemia, is a well-nourished and well-developed child, and the issue between life and death here depends on the individual ability to overcome the effect of the toxins on the vital centers and to withstand shock.

Where the effect of the toxins has not created pathologic lesions which prevent sufficient elimination, the child will do well; it may be somewhat stuporous, it may show albumin in the urine for several days, or it may develop convulsions typical with those of the mother; but with the above exception, these children do quite well, overcoming prematurity as well as children born to healthy mothers, provided they be given the same advantages of proper care and food. It has been the practice of the writer to have these babes nurse their mothers when elimination has been free for several days and the symptoms of acute toxemia have subsided in the mother, this usually being when the function of the breast is established under normal conditions. This, however, will not do well where the eclampsia is associated with a more chronic form of nephritis.

Where the child perishes before delivery, the finding on delivery will depend somewhat on the time elapsed since death, forty-eight hours being sufficient to start maceration of the fetus, this usually progressing with the time before

1. DeLee, J. B.: Principles and Practice of Obstetrics.

2. Williams, J. N.: Jour. Am. Med. Assn., lxiv, 95.

delivery. The characteristic lesions will be³ in the liver enormous dilatation of the intralobular and extralobular hepatic vessels with hemorrhages into the parenchyma and destruction of protoplasm and nucleus. The kidney likewise shows distention of the caliber of the vessels with hemorrhages and apparently pressure necrosis of the parenchyma.

With the death of the fetus the severity of the symptoms usually subside in the mother, and this fact has given rise to much speculation concerning the part which the fetus plays in the etiology of eclampsia.

In the placenta will be found hemorrhagic infarcts with localized necrosis, these patches varying from minute areas to involvement of the entire placenta; and this condition leads Young⁴ to his theory of the fetal origin of eclampsia, namely, that the placental infarcts are primary, causing placental separation and necrosis; the necrosis producing the antolysates which work destruction on maternal liver and kidneys, these antolysates not being absorbed where complete separation occurs. The experiments of Hull⁵ show that leucin and tyrosin, both formed from placental autolysis, create in the animal symptoms and pathologic findings identical with those found in human eclampsia, so that at present this phase of what has been considered the effect of eclampsia must be considered as a possible etiologic factor.

Having thus far dealt with the acute toxemia, let us consider the effect of the chronic toxemia. By the chronic forms of toxemia of pregnancy, we may understand those forms induced by lesions the effect of former sickness, for instance, measles, scarlet fever, diphtheria, pneumonia, typhoid, tuberculosis, syphilis, malaria, and conditions not so commonly thought of, namely, mechanical obstruction to the nasal passages, accessory nasal sinus infections, carious teeth, pyorrhea, anemia due to improper food, intestinal autointoxication, disturbed function of the ductless glands, and endometrial changes due to uterine displacements and cervical lacerations.

Aside from the effect of high temperature which the acute forms of these sicknesses may produce, or the specific effect of the individual infective agent on the placental villi or child, these sicknesses produce lesions in the endometrium which interfere with the healthy transition of same into decidua, and thus impair the vitality of the offspring.

In order to deal with these collectively, let us accept a group of symptoms that would suggest the existence of any of these conditions: lassitude or hyperexcitability, exaggerated reflexes, muscular cramps, headaches, dizziness, neuralgias, disturbances of the special senses, dry, thick, muddy or subicteric skin, with possibly eruptions, exaggerated pigmentations or edema; dry, coated tongue, thick, reddened, bleeding gums attacks of syncope or asthmatic attacks, low blood pressure, decreased urine and urea, and possibly albumin in the urine.

You will all agree that a group of these indefinite symptoms are frequently found in the pregnant patient and no diagnosis made of the causative factor; and it is just these patients who should arouse our anxiety and interest, not only for the benefit which we can do the individual, but for the benefit which we can do her unborn child.

The effect of this state on a conception will be sclerosis of the blood vessels of decidua and placenta, making them brittle and thrombotic, causing first early placental hemorrhage and white infarcts which may separate the ovum completely and produce an abortion, or partially, and thus mechanically interfere with the circulation of the fetus; second, produce premature detachment of the placenta at labor, with death of the fetus or placental autolysis, with development of acute eclampsia; third, by the accumulations of toxins in the blood, the villi may become so altered as to be unfit to carry on the function of nourishing the child; or, fourth, the toxins passing over to the child, impair the healthy development of same. The offspring of this mother is usually a premature, poorly developed, weakly, pale child, poorly endowed to meet the struggles for its existence, and will early show this by the development of jaundice and intestinal disturbance; and unless very ably cared for, easily develops umbilical, liver and lung infections, which bear the high mortality of 70 per cent.

It is the object of our present-day obstetrical teaching at the I. U. Medical School to include in our discussions of prenatal care this broad conception of the toxemia of pregnancy, trusting to eliminate more and more the effect of the same on the offspring. To this consideration permit me to add this plea:

1. Let us seek more closely for symptoms of the toxemia of pregnancy.

2. Let us think of the effect of this pregnancy beyond the termination of labor.

3. Cassaet and Chambrelent: *Bull. Soc. d'anat. et de physiol. de Bordeaux*.

4. *Proceedings of the Royal Society of Medicine*, June, 1914.

5. Hull, E. T., and Rohdenburg, G. L., *Am. Jour. Obstet.*, 1911, 919.

3. Let us study more carefully the effect of toxemia on the child born to the toxic mother.

4. Let us have more concern for this child born to the toxic mother, and help her keep her babe by insisting that this child is less favored by nature and needs medical supervision.

615 South Noble Street.

DISCUSSION ON PAPERS BY DRS. FERGUSON,
BURKHARDT, JACKSON AND BECKMAN

DR. H. A. DUEMLING, Fort Wayne: The wealth of material presented here certainly merits much better discussion than I am able to give it, both because of inability and because of lack of time. But I would like to pick out just a few points in the paper read by Dr. Ferguson and emphasize them.

One is the extreme importance of careful and thorough examination of the pregnant woman long before her anticipated confinement becomes due. The second is looking for tears—perineal tears. It is all too common a practice, even in this day, that these tears are not taken care of, that the physician, perhaps tired and perhaps in a hurry, does not take the necessary time to inquire into the condition of the perineum when he leaves the case, and consequently his patients are brought to the hospital where they are helped, but never brought to the point of health they could have obtained had the tears been taken care of at the proper time.

The paper of Dr. Jackson is one on which I would like to spend a few minutes. The operation of cesarean section gains in value just as its technic is simplified and as indications for that operation can be accurately determined. It is not so long ago that cesarean section was an operation of extreme rarity, and it is only about ten years ago that Dr. Porter and I had the pleasure of doing what we believed was the first cesarean section in the city of Fort Wayne. I have now had some thirty-three or thirty-four cases that have been done in hospitals or homes.

I would like to emphasize some of the points made by Dr. Jackson by some reports of cases, if you will permit me, and which points shortness of time prevented him from dwelling on.

1. Relative disproportion between the size of the birth canal and fetus. Here was a woman who had been delivered by forceps three times, of three mutilated children with fractured skulls, with torn heads and faces. Each time her hopes were destroyed by what surely was a bungling delivery. She was a small woman and the disproportion between her pelvis and the child was evident each time. This woman was delivered some weeks ago by the cesarean route, in a little bit of a room on the second story of a private dwelling, and this baby rep-

resents the first live child she has out of four pregnancies. Another woman is delivered of six children; the first one lives but is an inmate of the Home for Feeble-minded; five others were killed, and the last one lives—by virtue of cesarean section.

2. Abnormal presentations. I have had very little experience with subjects such as Dr. Jackson speaks of. What I have had was where the dystocia was due to neoplasms. I would like to tell you of one case. Here is a woman who is in labor and has a large tumor behind the uterus. The physician, one of the finest in Fort Wayne, a very careful man, asked me to puncture that ovarian cyst through the vagina and make an ordinary delivery. I objected. We finally delivered this patient by cesarean section, and I pulled out a very fine dermoid, and I would have had a great time had I punctured through where I could not see. In another case the neoplasm consisted of fibers, the size of a large cocoanut. The patient was a primipara, and we had every reason to believe she was pregnant for eleven months. The child weighed over 15 pounds. We of course finished the operation with a hysterectomy. The young man was so large that I pleased the mother by presenting him with a pair of boxing gloves. He looked as though he could walk off the table.

Shoulder presentation: In one case the shoulder was so impacted and the uterus was so intensely contracted that it was evident we could not make a delivery of a living child unless we resorted to cesarean section.

Talking about concealed hemorrhage—here is one of our last Indians brought to the hospital to be confined. She was at the hospital for a week. On the afternoon of a certain day while I was preparing to operate on another case, the nurse came and reported that this patient was in a bad way. I ran to the room and found her gasping, pale as death, very little blood to be seen; she was calling for help and saying she was dying. I immediately took her into the operating room and opened the abdomen and delivered her of a living child.

My own experience in eclampsia has been very unfortunate. My fetal mortality is very great. I believe, especially in the case of a primipara where there is immediate dilatation, the only method is to empty the uterus by cesarean section. I submit that I can take my knife and deliver such a patient in less than half the time required by any other way. And besides, I have full control of my field.

Now as to emergency conditions. I had a case of tubal pregnancy at full term. This pregnancy went on to full term inside the tube. It was not abdominal pregnancy or ovarian pregnancy—it was tubal pregnancy, and when

I opened the abdomen I found the child and the placenta inside of the tube itself.

I think the case I will relate to you now should have been cesarean. The patient was on the obstetric table and she was under an anesthetic. I placed my hand on the abdomen over the sterile gauze and felt a distinct vibration of the abdominal walls and heard the baby cry in that uterus. It was not a weak cry; he cried lustily. It was a transverse presentation. Just a few months previous to that one of my friends had reported such a condition and I thought he was the biggest liar within the confines of the state, but I will have to take that back.

One other case that would indicate cesarean section was a patient who had double hip-joint disease with distortion of her limbs so that it seemed impossible to make delivery other than by section.

DR. CHARLES N. COMBS, Terre Haute: The medical profession, like other large bodies, has a very considerable inertia, but occasionally some new development of public opinion suddenly applies an immense pressure to bear and we are aroused from our comfortable lethargy with a peremptory command to act at once. The Freiburg fad spread over this country with a rapidity that defied any kind of quarantine. We were met by a universal demand to demonstrate immediately that we had as much sympathy with the woman in travail as our German friends. With the Friedmann fiasco fresh in our minds, we were inclined to tender this latest effusion of printer's ink anything from frigid disdain to fiery denunciation. The only compliment that "twilight sleep" deserves is that it discovered in our well-meaning but lagging methods a chance for improvement.

The trend strongly points to a perfection of the nitrous oxid air or oxygen analgesia as the most desirable and satisfactory. The morphin-scopolamin *dämmerschlaf* cannot succeed except in the hands of a limited number of experts skilled by means of numberless cases, as the amount of time and patience required by the hair-splitting niceties of the original technic is incompatible with the demands of a general practice. Morphine as generally used is highly successful in subduing pain, but collects a heavy toll of stillborn infants. However, used in the first stage of labor only, this objection is not pertinent. The many sudden deaths under chloroform reported as embolism, and the maternal toxemias attributable to its use disbar that drug in obstetrics except for those who do not study statistics en masse, but are guided by their own individual self-interpreted experience.

All the criticisms of ether mentioned in the paper are void when it is given properly. The very gradual induction of the narcosis, pushing

it only when the patient drowns between pains will be rewarded by an absence of excitation, which if present undoubtedly exasperates one who is conscientiously aseptic. Pneumonia is quite unlikely from the small amount of ether requisite to maintain analgesia and not anesthesia.

Dr. Burkhardt seems to dodge the issue with his patients by telling them that he will certainly use "twilight sleep" in proper cases where it can be employed safely. I think he should tell them that the use of nitrous oxid in hospital practice by the obstetrician, and the more liberal use of ether skilfully administered in general practice is sufficient and at present stands without apology.

Of all the conditions mentioned by Dr. Jackson involving the mooted question of whether to do a cesarean or treat otherwise none is more debatable than eclampsia. Here, again, we see an intricate method of medical treatment instituted abroad challenging the impetuosity of the American surgeon, but showing a lower mortality rate. Stroganoff of Petrograd isolates the eclamptic in a dark room, absolutely excludes all external noises and contact, insulates the entire sensorium and benumbs the higher centers by morphine, chloral and chloroform. This is the so-called expectant treatment carried out with a vengeance and possible only in countries where the physician can be an autocrat. The results are a reduction of the fetal mortality from 50 to 20 per cent. and the maternal mortality from 20 to 6 per cent.

Contrariwise, Dr. Reuben Peterson insists that no one is justified in dismissing the treatment of eclampsia by abdominal cesarean section with a short statement that the mortality is so high as to make it an unjustifiable operation. Compare the celerity and expertness attending a section done by almost any of our surgeons at the present time with the prolonged uncertainty awaiting the final result of any other *modus operandi*, and if you have the courage of your secret convictions, you will choose the former. Speaking as a medical man solely, jealous of the overshadowing fame of my surgical brethren, I still think that here is another case to entrust to their care, the only exception being a multipara with a roomy pelvis and a yielding cervix.

DR. FLETCHER HODGES, Indianapolis: I would like to mention the case of Mary G., a widow aged 65 and colored, giving a history of frequent uterine hemorrhage. On examination we found her to be of medium height, but of thin physique except for an enlarged abdomen which resembled seven or eight months' pregnancy. Abdominal examination revealed the following: The uterus was enlarged and appeared like a pregnancy somewhere between seven or eight

months along, but of course this was ruled out because she was 65 years of age and a widow. But palpation showed a uterine tumor containing many fibrous tumors varying in size from very small up to the size of a grapefruit. On this of course we based a tentative diagnosis of uterine fibroids. This abdomen gave the patient a frog-like appearance—a thin body and large uterus. On examination the examining finger used to palpate in the anterior culdesac found a large, hard, round ring of the diameter of a lead pencil, which on further examination was also found posterior. The cervix could be felt readily enough. On inserting the finger back of this object fibrous bands were felt to give way. Being interested in this procedure, I tried again by sweeping my finger around and getting in the rear of the culdesac and the same thing happened there. It turned out to be a hard rubber pessary which had been inserted twenty years before and entirely forgotten.

Now the question immediately arises in my mind how much this foreign body—common enough in practice—had to do with the fibroids. Of course, we know that the colored race is predisposed to fibroids. Dr. Cabot used to say that every negress had fibroids. But I am wondering how much that foreign body had to do with the fibroid condition of the uterus.

I regret I did not hear all of the papers, but I think as a general practitioner I will still stick to a drop of chloroform now and then to ease the pain in labor, although I was trained in the other way—toward ether.

DR. A. S. JAEGER, Indianapolis: The four papers presented by the essayists have been so thoroughly prepared that one cannot say very much except to speak in favor of them, except in some minor instances.

Unfortunately, I did not hear all of Dr. Ferguson's paper, but he and I know each other very well and have gone over this matter so often that I know what he says agrees with what I think. In discussing the subject of the toxemias of pregnancy, and especially eclampsia, we must first decide if possible whether we really are dealing with the toxemia of pregnancy or with some other systemic intoxication which is occurring during pregnancy, and it seems to me that the outcome of the case depends to a very great extent on whether the eclampsia is really the result of pregnancy or the result of some primary condition of the kidney, liver or some other organ. The fact of the matter is that the best way to prevent eclampsia is to treat it before it occurs. That could be done by the general practitioner. However, the men who see these cases only when some imperative emergency exists have not a chance to do anything, except what can be done at once, and that brings us to the discussion of cesarean section. I will say frankly

that I am one of the men who are distinctly in favor of cesarean section, when section is indicated. I have gone over my case records for the last six years and I find I have performed this operation thirty-six times; fourteen with eclampsia and the other cases were because of relative disproportion, uterine fibroids, impacted shoulder, placenta previa, etc. I wish to say that out of these thirty-six cases only six of them were cases which came to me primarily to look after. The rest were cases seen either in the City Hospital or in consultation. Four mothers died and two children died. These four mothers were all City Hospital cases. I have not lost a case in private hospital or private house work, simply emphasizing the fact that if cesarean section is done under proper conditions and environment the mortality, so far as the mother is concerned, is practically nil. Three women died as the result of eclampsia. There was absolutely no hope of saving the mothers; they had been in labor from twenty-four to seventy-two hours and had had convulsions; we saved the three babies. One woman had been in labor for seventy-two hours and had been treated by a midwife and an intern who did not know they had a transverse position. When she came to the hospital, examination showed that the impaction of the fetus was so great that we felt we had a head presentation. We operated and found the transverse pole of the uterus so low down that we could not do the operation. She lived for three days and died. The fourth case was a young woman who died of double pneumonia. The two babies who died, one lived two or three hours and one about five hours. These two cases in which the baby died were practically borderline cases, and I feel that if we had attempted to deliver the babies by the old method we would have been criticized for not doing cesarean section. At least we have the mothers now—and they have no lacerations.

In deciding when to do cesarean section in eclampsia, one is up against a hard proposition. We cannot have a set rule as to when to operate, and in my own experience I have some tentative rules. If the woman is in eclampsia at term, then my custom is to deliver as rapidly as possible. If the woman has no pulse and a rigid os, I do the cesarean section. If eclampsia comes at seven or eight months I believe everything should be done to carry these women to term if possible. To use high forceps is to my mind criminal if they are used on an unengaged head. There is absolutely no use of doing that, and I do not believe any man who has had any experience in doing cesarean section would entertain the idea of doing a high forceps delivery when he can so commonly by cesarean section save the mother and child, where with high forceps the babies die and the mother is mutilated for life.

DR. F. B. WYNN: Dr. Kemper, you used to present us with material in regard to obstetrics. We would like to hear from you.

DR. G. W. H. KEMPER, Muncie: You know I am getting to be a back number now. I began my practice fifty years ago, and I have had a very extensive practice in obstetrics. My book shows 1,445 cases.

One point I want to mention. I wonder why we have so much dystocia in labor at the present day that I did not meet with fifty years ago—among farmer's wives largely? I had 400 obstetrical cases before I used forceps. I really had no occasion for forceps. I think I have had twelve or fifteen cases of puerperal convulsions. One patient died; the rest all recovered.

I came into practice about the time that Oliver Wendell Holmes and Charles D. Meigs were having their great discussion about whether it was proper to use chloroform. You young men of course know nothing about that. Meigs thought it was wrong to use it, but I had read Meigs' Obstetrics and then Church's. Church taught us that puerperal convulsions were very dangerous, that two out of three died. We do not meet with that at the present day. There is a nervous element in the case of the parturient woman at the present day that we did not meet with years ago. I think I have prevented and I am sure I have cured a great many cases of puerperal convulsions by using a hypodermic injection of morphin. I never hesitated when I found a woman that was near labor, in labor or immediately afterward.

I read a paper five years ago at the meeting at Fort Wayne. I collected fifty-three cases. I started with some historical matter, and then I showed that it was an advantage—I think I proved to the members that we do well to resort to cesarean section. I had never seen a case when I read that paper, but I witnessed one a short time ago. I have never performed the operation myself.

I recall a wonderful paper that was read here in the early '70's by the orator, Yandell—a plea for chloroform in obstetrics. If you will turn back to the transactions in the early '70's you will find it. It is a wonderful paper. My dear young friend, Dr. Combs, do not be afraid of chloroform. I feel just as safe about it. Possibly my experience in the Army in giving chloroform and never witnessing any unfavorable results, makes me feel safe; but yet sometimes it is possible that it may result seriously. But I do not hesitate to use chloroform in obstetrics—or did not when I was practicing. I am down and out now, but I am not afraid of chloroform. I think in the last few pains just to give a few whiffs of chloroform is of great benefit. The "twilight sleep" I have not used. When I drive a horse I like to hold the reins. I do not like

to use a whip and then let the horse go. I am afraid. And so with "twilight sleep." I am afraid, especially when we have such a good remedy as chloroform.

DR. H. H. BONN, Indianapolis: I want to express my appreciation of Dr. Jackson's and Dr. Beckman's papers. I was unfortunate enough not to hear the first two. While I greatly admire and respect Dr. Kemper, I want to give a little testimony in favor of Dr. Combs. Some two years ago I was doing some experimental surgery. I had a dog die, and on performing an autopsy it showed that the chloroform had poisoned him. In order to verify it we chloroformed about ten dogs and kept them under for two and a half to three hours. In each one of these cases the liver showed—on microscopic section—just about the same changes. If you would give chloroform to an eclamptic woman—enough chloroform—it would do the same. I firmly believe that the minute the woman in eclampsia has the first convulsion, that is the time to stop the chloroform. Take ether, and you can keep her comfortable, but I believe you should use nitrous oxid instead of chloroform.

DR. GEORGE R. DANIELS, Marion, Ind.: During my student life I had quite a dog practice, and I gave chloroform to a good many dogs. I do not know how the liver of the dog looked, but since then I have been giving chloroform to nearly every woman I have waited on in confinement. I am getting pretty old, not as old as Dr. Kemper, but I think just as much of chloroform as the doctor. I would not think of going without it. You who have taken ether can testify that you would rather take chloroform, and to my way of thinking, in a surgical operation chloroform is just as safe as any general anesthetic, including gas or any modern way of giving an anesthetic. I go further than the doctor—whenever you get Squibbs chloroform you are just as safe as with ether. All the deaths from anesthetics where I have been present were from ether. I have never seen any from chloroform. I am rather a peculiar fellow and some say I am contrary, but I expect to hang on to chloroform.

DR. HANNAH GRAHAM, Indianapolis: I think one of the principal things when you first enter the obstetrical room is to gain the confidence of your patient. After she has confidence in you you will not need a great deal of chloroform to control the patient because she will do what you tell her. If you wait until she is hysterical and has worked herself into a nervous condition it will take a great deal of chloroform to control, and possibly it may be necessary to use ether. But in the majority of cases if you enter the room and let it be known you are there to manage her case it will take very little chloroform

to deliver the average woman who may be delivered in the normal way. I remember one case in which I was called by another physician who said "I cannot do a thing with this patient." She was quite hysterical and wanting to get out of bed and there was really no controlling her. This physician was younger than myself and I immediately said to the patient, "You can get up and walk." She looked at me. I said, "Walk three times around the room." She did. Then I said, "Walk five times around the room." Finally her mother said, "That is the first time in my daughter's life that anybody bossed her." I told her how to help herself and saw that she did it. There was very little chloroform used. I have used chloroform in most of my cases and I have found no untoward results from it; but I do not use very much. I commence as late in the game as possible and I give as little as will keep the patient comfortable, and I want to speak one good word for chloroform.

DR. J. H. PAYNE, Julietta: I want to add my testimony in favor of chloroform. My practice has been just as the last speaker has said, to "boss" my patients, and I never have found it necessary to administer chloroform for any very long time. I have full confidence in chloroform and always have used it and never had any untoward results, therefore I freely add my testimony in favor of chloroform.

DR. PAUL S. JOHNSON, Sheridan: Although coming late, I am much pleased with this series of papers, but one thing I take exception to, and that is what causes me to speak at this time. In regard to high forceps procedure, I do not like the characterization of "criminal," although I have never used high forceps in but one case, and then it was justified. I occupy quite a singular position in the community where I practice—I am on good terms with the other doctors, not only in town but in the country around, and when the roads are almost impassable or they have no opportunity to send for another man, they call me. In one case they tried everything, even pituitrin—which was properly indicated, by the way—but she was an exhausted woman. I found her with a very pendulous abdomen and it seemed the product of conception was trying to come out just above the pubes. On examination at least 50 per cent. dilatation was present. On further examination I found what seemed to be the presenting part resting on the sacral promontory. By the use of high forceps in that case the head was immediately dislodged from this position and a living child and living mother resulted in less than an hour. When I was called they thought I would do a cesarean section. I never had done one, but as I have told you, the high forceps accomplished the result in that case. It would please us if you would make a possible exception in the case of the country

doctor. We do not like to have thinking people believe that the high forceps operation is criminal.

DR. C. E. FERGUSON: Why did you not try version?

DR. PAYNE: It was a tightly folded child and the woman was almost moribund, wholly unconscious, and I was bearing in mind that possibly I might have a cesarean section to do. But the thing suggested itself to me and was really not difficult.

DR. MILES F. PORTER, Fort Wayne: I would like to say perhaps two or three things. In the first place, I have heard here this afternoon two or three or four statements that ought to be taken with a grain of salt or some explanation. We heard that with all this, that or the other thing along the line of treatment, the fact that the woman got well was proof positive that it was the best line of treatment to follow. Not true at all necessarily. Another statement was that under certain circumstances after having delivered the child we of course should do a polar operation. Not at all. If there is not any particular reason for making it impossible for that woman ever again to become a mother, then of course we should give her a chance subsequently to become pregnant. Another thing, I would like to see an all-round section of that tube that contained that viable child. I would have to see it before I would believe it was of nine months' development and still resided in that tube. I am from Missouri when it comes to believing it was in the tube. It might have been within the broad ligament.

It does not follow that because you give a thousand women chloroform and you put them to bed and they seem all right—it does not follow that it does not hurt them. The deaths or serious illnesses that have followed the administration of any anesthetic have come for the most part not on the day of administration but some time afterward, and whether I am afraid of chloroform or not, it is an arbitrary fact that chloroform does produce necrosed liver tissue, more even than ether. We must all bow before the force of facts.

DR. C. E. FERGUSON (closing): Since you have made chloroform the issue I would say that my objection to chloroform is not from any personal experience, because as a young man and student I gave chloroform for surgeons here a great many times without a death. On the other hand I have seen four people die under chloroform before any operation was ever attempted. I know further that the statistics show that there are a great many more deaths from chloroform than from ether. I would rather personally give chloroform because it is so much easier and the patient goes under quicker. We know the pathologic changes in the liver that take place

from chloroform are very close in their anatomy to what we find in eclamptic livers, and so I said—and I am voicing the authorities—that we should not give chloroform as in the past to quiet the convulsions in eclampsia, because it is very possible that chloroform will simply add to the injury that the liver is already suffering from too much poison.

DR. LOUIS BURCKHARDT (closing): To quote an old German proverb, "What is good for one need not be good for all." This discussion about anesthetics will be an open one for years and years to come, and when I presented my paper I only tried to give you my personal views of today. I absolutely reserve the right for myself to change my views by tonight, within a year, or within ten years if I see fit. Chloroform today is not the same as ten years ago. Twenty years ago we could only depend on English chloroform; today we have other just as reliable preparations. Dr. Combs makes a specialty of giving anesthetics, and he certainly is a hundred times more fit to do so than I was fifteen years ago, and if he feels no anxiety it is because he has the experiences of thousands and thousands of men to back him up.

Now about chloroform in obstetrics. Do you know how much I use for a labor case? The average is from 4 to 6 drams. Would this amount affect the liver? You might just as well say that a fellow becomes an alcoholic because he uses 6 drams or something like that once or twice in his life. If a woman every two years gives birth to a baby and then has a few drops of chloroform at the end of the opening stage and also during the expulsion stage, such a dose would certainly not make a lasting impression on her system.

As to "twilight sleep," I went to Chicago before I had to address this meeting to find out what the gentlemen in Chicago knew about it. Webster uses nitrous oxid for any delivery; he does not use anything else. But Dr. Lee, who was one of the first to condemn it, uses it in 30 per cent. of his cases. But he will change his views again, as Webster will change his views. Scopolamin amnesia is only an incident in the development of anesthesia. Let us not be too extreme in advocating one means or another. I am much more in favor of using ether or nitrous oxid than I was a year ago, but that does not mean that I may not have different views in another year.

DR. H. F. BECKMAN (closing): I have just one thing to say. Do not continue to neglect that baby.

DR. G. B. JACKSON (closing): The main point was not insistence on surgery where surgery is not indicated. The main point was the proper conduct of the case so that if surgery was

indicated some of the prerequisites for surgery might be present. On the other hand, there is a good deal said about not entering the abdomen if there is a possibility of infection in the case. I am not absolutely certain that I stand flatly on that proposition. I believe that the perineal cavity will take care of some infection and I am inclined to believe it will take care of as much infection as the uterine cavity. In other words, if the case is infected she is in bad whether you open the abdomen or traumatize the birth canal.

In the indications oftentimes we meet exceptions in traumability to the operation from below. The reason is the consideration that we have, due to our observations in gynecologic work, for the lower wall of the abdomen, and that is what the floor of the pelvis is—one of the abdominal walls, and we cannot injure and repair that wall in the typical way that we can the anterior wall.

In the matter of tears of the perineum, I think we are all beginning to understand that the fellow who has done many deliveries without tears has overlooked them. It has been my experience twice in the last six months to repair perineal tears which showed no break whatever in the vagina or perineal skin, and yet the muscle was torn completely so that I could lay my finger in the break. I repaired it without making a cut by simply taking a curved needle and reaching the muscle above and below and bringing it together.

The matter of disproportion in these borderline cases is certainly worth our consideration, but it is a matter of education of the general man. There is too often a greater disproportion between the physician and the case in front of him than there is between the fetus and the pelvis, and that is one thing that it is the object of this Association to correct.

THE control of venereal diseases is an ever present and pressing question. According to the *World Almanac*, the following legislation was passed in the year 1915 directed toward the control of venereal diseases. These diseases must now be reported in Connecticut and Vermont, and the Vermont act punishes severely any person suffering from such diseases who marries. The Ohio act makes wilful betrayal by a physician of a professional secret such unprofessional conduct as to justify a revocation of license, but provides that any physician who informs a party to a contemplated marriage of the fact that the other party is suffering from such disease is not to be deemed guilty of betrayal of a professional secret and shall not be liable to damages.

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OF THE

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Devoted to the Interests of the Medical Profession of Indiana

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EDITORIALS

THE EQUITABLE STINGS ITS MEDICAL EXAMINERS

Indiana doctors who hold positions as medical examiners for the Equitable Life Assurance Society of New York, one of the largest and wealthiest insurance companies in the world, are being visited by Dr. F. W. Foxworthy, of Indianapolis, a representative of the Equitable, who naively gives the information that his visit has a twofold object; first, to determine how well the examiners for the Equitable are equipped to make life insurance examinations, and how efficient the examiners are, and, second, to advise the examiners that hereafter the fee for a life insurance examination for the Equitable will be the munificent and liberal sum of three dollars.

Ye Gods! the nerve of it, to send a representative to check up efficiency and equipment, presumably for the purpose of demanding more and better service, while at the same time stinging the doctor by telling him that for all his time, effort and expense in equipping himself and in making himself competent to perform the most exacting work, he is going to have his remuneration cut down nearly 50 per cent. And Dr. Foxworthy volunteers the information that he expects an increase in his salary as a medical referee or some other kind of adviser for the Equitable. Why shouldn't he get a raise? Doesn't the Equitable pay its officers well, and isn't it worth a raise if Dr. Foxworthy can smooth things over here in Indiana so that the doctors will accept three dollars for an examination that is worth three times that amount? Somebody must pay for Dr. Foxworthy's services, the enormous salaries that the officers of the Equitable receive, and the large commissions that are paid to agents, and as all of it cannot be collected from the policy-holder there is no reason why it shouldn't be squeezed out of the fund which rightfully and justly should go to the medical examiners.

The very existence of life insurance companies depends upon the service rendered by the medical examiners, but what difference does that make in estimating the value of those services in dollars and cents. The doctor is an "easy mark" and will take what he can get and what is offered. And, remember that the proposition to reduce medical examination fees comes from no one else than some doctor who holds a soft berth himself and is willing to shove the knife into his brother practitioners if he can make a better showing for himself.

Will the Indiana doctors accept the cut in their fees for examinations for the Equitable? Some of them will, for they are a lot of spineless goats that can be driven to anything. They will even agree to give a complete physical examination of the applicant and add chemical and microscopical examination of the urine, a complete blood examination, not omitting a Wassermann, and to drive ten miles to render the service if the liberality of the Equitable in paying three dollars for the service can be counted upon. In the meantime the Equitable officers continue to enjoy princely salaries and the agents receive splendid commissions, while the real service man, the one who is most vital to the success of the company—is trampled upon ruthlessly, even gleefully, *because he stands for it.*

We call ourselves *professional* men, and we aim to render the highest type of skilled service, yet we would be better off in many respects if we ranked as workingmen and would organize like workingmen to secure fair treatment. On every side the medical profession is feeling the hand of oppression, and but little is being done to stop the injustice that is being done. Our work is recognized as being indispensable and we are urged to continue it, but we are shamefully imposed upon because we lose sight of that old adage, "self protection is the first law of nature," and through lack of concerted defensive action permit our rights and privileges to be trampled upon.

There was a time when no large life insurance company thought of offering its medical examiners a fee less than five dollars, and the examination required was exceedingly superficial as compared to the exactions of today. Medical proficiency has increased, at an increased cost of time, energy and money, and the standard of living has likewise increased. Wages for any and all kinds of work excepting medical work have increased. The only reason why medical fees have not increased, and why the Equitable can cut its fee for medical exami-

nations, is that the Equitable deals with individuals and not the profession as a whole.

The doctors are not organized for protection. They organize for scientific improvement and all manner of social and benevolent advancement, but they fail utterly in recognizing that their future existence depends upon organization for business.

If one, or a dozen doctors tell the Equitable that they will not stand for Shylock treatment, it amounts to nothing, for the Equitable can fill the ranks when there are only a limited number of deserters, but if even a majority of the qualified physicians refuse to be brow-beaten and coerced into accepting niggardly fees from a company that has an unsavory reputation for wild dissipation of funds, then some attention is given to the justice of the claim of medical men, that for such a painstaking and technical piece of work as a life insurance examination a respectable fee should be paid. Unless the medical men collectively, not singly, make some effort to correct some of the existing evils, it may not be long before the Equitable, under the advice of some astute chief medical adviser, will announce that medical examination fees have been cut to one dollar. Some officers of the Equitable on a salary of fifty-thousand dollars per year may, as in former days, want to give a "sparrow dinner" at the expense of the company, and of course to cut down operating expenses to meet such drains the simplest way out is to cut down the cost of medical examinations.

How long will the medical profession stand for it? How long will we permit such questions to be settled by the individual without sanction or approval by the profession as a whole? In union there is strength. We fail now because we act as individuals. Why shouldn't the members of the Indiana State Medical Association collectively take a stand on this question of compensation and then individually live up to the agreement?

MEDICOPOLITICAL INFLUENCE

One of the district medical societies of Indiana has sent a letter of inquiry to various candidates for the Indiana legislature asking for a statement as to how such candidates stand on questions pertaining to public health, medical education and allied subjects. One or two newspapers have made considerable capital of the incident, and taken occasion to criticize the medical profession in a caustic manner, and in particular the American Medical Association, for its activities in fighting pseudomedical cults and the nostrum evil. One of the editorials, and perhaps more, has been reprinted in leaflet form

and sent broadcast over Indiana, being mailed from a Christian Science office in Indianapolis.

It is not difficult to determine the animus which prompts any newspaper to oppose the medical profession in efforts to stamp out deception and fraud, for were it not for the patronage secured by newspapers from nostrum advertising and the advertising of numerous pseudomedical cults, such frauds and near frauds would cease to exist. In any controversy concerning the raising of health standards those interests that are harmed take occasion to cloud the issue by attacking the medical profession on the ground that an ulterior motive is back of all efforts of the profession to modify conditions. As a matter of fact, there is no profession or trade that has been so self-sacrificing, or has advocated so much legislation that is suicidal to itself, as the medical profession, and we defy any one to point to a single measure that has been advocated by the medical profession or has been placed on our statutes as a direct result of the influence of the medical profession, that has not been more in the interests of the public than in the interest of medical men either individually or collectively. In fixing the standard of qualifications for the practice of medicine, the regular medical profession has taken the rational and sensible view that there can be only one standard covering preliminary qualifications. To treat pathologic conditions or deformities of the human body one should know the human body, and know and be able to recognize deviations from the normal. Such knowledge is not acquired by reading Mrs. Eddy's inspired (?) book, nor through attendance at the few weeks of indifferent instruction given at the average schools for osteopaths, chiropractors, and similar pseudomedical cults. There are certain essential facts concerning anatomy, physiology, bacteriology and pathology which should be known before one attempts to treat suffering humanity, and it is just as necessary for the doctor to know those facts as it is for the locomotive engineer to know the difference between the forward and reverse levers in his engine, or to understand the significance of the readings upon the engine's steam gage. The regular medical profession is quite willing to permit individual physicians to *treat* diseased conditions as they see fit, but they do maintain that the one who is doing the treating should know what he is treating and the significance of it.

The attitude of the regular medical profession concerning the question of nostrums is one that is justified in the light of a knowledge that all nostrums are frauds to a more or less extent,

and knowing these facts, medical men would be derelict in duty if they did not attempt to protect the public from imposition. The majority of the proprietors and owners of newspapers know and admit that the nostrums they advertise are frauds, and yet they are willing to encourage and sustain these frauds because such action is a source of revenue to the newspapers that accept nostrum advertising. The American Medical Association has gained the enmity of the nostrum manufacturers and certain newspapers because of the persistent warfare on these frauds, and in like measure the pseudo-medical cults and quack doctors of every description are loud in their condemnation because the American Medical Association has shown them up in their true light. The work that has been done by the American Medical Association is not in the interest of medical men at all, for it does not help them one particle, but rather helps the public to see the dangers of deception and fraud which often produces more harm than is attended by the mere money loss.

To advocate the establishment of hospitals and homes, under state control, for the free care of the sick and afflicted is not putting money into the purses of physicians, and it is time that the public should have a keener realization of the fact that the medical profession has never yet profited as much as the public in any of the legislative enactments that it has fathered. The difficulty in forcing this on the minds of the people has arisen through the lack of concerted action on the part of medical men in presenting the case as effectively as the opposition presents its case. Medical men as a class are busy and are little inclined to dabble in politics, and can little afford the time and expense required to plead a cause which is of more benefit to the public than the profession. On the other hand, the "patent medicine" interests and the pseudo-medical cults, aided and abetted by a venal press, have spent and are spending enormous sums of money in creating and perpetuating a species of graft and fraud that is of the lowest order because its traffic is among the sick and distressed, and more often among the poor who can ill afford to be swindled.

It is a little remarkable that the medical profession, with such comparatively little effort and such a small expenditure of money, has been able to accomplish anything when facing such obstacles; but the time will come when public opinion will set its seal of approval on all efforts to stamp out fraud and deception in relation to the care of the sick and afflicted. Already the better class of newspapers and periodicals of every description refuse to accept medical advertising of any kind. A few news-

papers that worship the dollar more than they do truth and justice will continue to carry medical advertising and assist in perpetuating the fraud until they are forced, by public opinion, to quit the practice. The death knell to nostrums and quackery will be sounded when advertising pages are closed to them.

DRUGGISTS' OPPOSITION TO DISPENSING PHYSICIANS

Evidence is accumulating to prove that druggists as a class are enemies of the medical profession. In some states the druggists have succeeded in securing legislation that is favorable to themselves while decidedly objectionable and obnoxious to physicians, by making it a misdemeanor for a physician to dispense medicine. In other words the physician is compelled to write prescriptions for everything that is prescribed for a patient, no matter how unjust and inconvenient it may be, or how detrimental to the best interests of the suffering patient. Even emergency cases are not taken into consideration.

In analyzing the situation, we find that the chief reason why so many physicians have been led to dispense drugs is because the average druggist has shamefully abused the confidence that was placed in him by the medical profession. He has not hesitated to refill prescriptions on his own initiative, whether such prescriptions were indicated or not indicated in the treatment of the patient, and has possessed no scruples concerning substitution. To add to the offenses committed, he has become a prescriber himself, and seldom does an afflicted person appeal to him for aid without being prescribed for—in some cases a vile nostrum being given, or perhaps the prescription of some reputable physician being applied to the case. The sale of patent medicines has been promoted by the druggist, and few druggists have hesitated to give their personal endorsement of the most worthless nostrum. All efforts on the part of medical men to correct these evils have been unavailing, and when doctors, for their own protection as well as the protection of their patients, have found it necessary to dispense their own drugs, a howl goes up from the druggist, and straightway the retail druggists' associations enter the political arena with the avowed intent of legally putting doctors out of business so far as prescribing medicines is concerned. And aside from the pulling of political strings, the retail druggists are attempting to force manufacturers to refuse to furnish physicians with medicines.

Only recently M. A. Stout, of Bluffton, Indiana, in an address before the national association of manufacturers of medicinal products (*N. A. R. D. Journal*, Feb. 24, 1916) virtually asked for cooperation in preventing the medical profession from obtaining supplies. Incidentally, he makes some charges which, while perhaps true in a limited number of cases, are not true so far as the great body of educated medical men are concerned. He says:

"Today the dispensing physician is not dispensing medicine, but he is dispensing names and numbers. He knows scarcely anything of the composition of the remedies he dispenses. The thing uppermost in his mind is 'How cheap can I buy it?' and the result is dissatisfaction to the public."

Is this shot aimed at the Indiana doctors and the Bluffton doctors in particular? And then he proceeds to condemn the medical profession in a wholesale way by saying:

"There is scarcely one physician in ten who can go to a bedside, diagnose the case, and write a prescription that will fit the individual case. . . . The only things he knows are names and numbers, and he could not write an intelligent prescription if he wanted to."

Again he pays his compliments to the medical profession when he says:

"One might as well call into the home where there is sickness today, some mother who has reared the average-size family; she can diagnose the case and tell you the child should take a Mother Gray's worm powder, Dr. Hand's colic remedy, or Grandma Bell's pine tar and honey cough syrup, and in a good many instances obtain equally as good results as the average medical practitioner of today."

This is a libel upon the good name of a number of the physicians in Mr. Stout's home town, to say nothing of being a libel upon the good name and reputation of hundreds of physicians in Indiana. And finally Mr. Stout appeals to the manufacturers of medicinal products to eliminate physicians as customers, and the plea is made that the law will uphold these manufacturers in that practice because, as he glibly tells us, the courts have held that "a person or firm has a right to choose its customers."

It is just as well that the medical profession should know what is being done by the retail druggists to cripple their usefulness, and it may not be a bad idea to remind the druggists that efforts to profit at the expense of the medical profession may result in disaster, for if the worst comes to worst there is no law which will prevent doctors from owning their own drug stores. Furthermore, we might suggest that if laws are to be enacted to abridge the rights of

physicians, it may not be out of place to advocate laws which will make it a criminal offense for a druggist to prescribe or recommend a medicine unless he holds a physician's license. We admit that doctors as a class are a little slow to resort to retaliatory measures, but there may come a time when patience ceases to be a virtue, and if the doctors awaken to a realization of what confronts them in the way of antagonizing legislative restrictions advocated by druggists and others who desire, for their own profit, to cripple the efficiency of the medical profession, it may be that doctors will find a way to show their enemies that there are certain privileges and rights belonging to physicians which must not be trampled upon and that it is a poor game that two cannot play.

THE PSEUDOMEDICAL CULTS AND LEGISLATION

The patriot who gave utterance to the sentiment, "Eternal vigilance is the price of liberty," had in his vision the empires and monarchies of Europe, from which he and his immediate ancestors had fled to found a democracy on the shores of the New World. To him and his compatriots the successful establishment of a democratic government marked the final emancipation of mankind from all those bonds which prevented a full and free social, political and intellectual development. One hundred and forty years of the life of this democracy have passed and we now know that the vision of this revolutionary patriot in the light of present history was a narrow one. We know that liberty has its pitfalls and democracy its weaknesses. Ignorance, prejudice, poverty, fanaticism and quackery block the progress of the race as effectively as kings and kaisers, and these evils flourish under a democracy as luxuriantly as in Old World empires. Encouraged by a tolerant and liberty loving people the propagandists of this cult and that cult have assailed the great fundamental truths which medical science has contributed to the progress of the race. The convening of almost every legislature is the signal for an assault by these cults, not on the medical profession alone, but on the entire fabric of medical science which has been worked into our laws designed to protect and guard the health of the entire population of our country. To be sure, the attack is ostensibly directed against the doctor and his business, but this is only a confusing of the issue, and is made because it appears to be the most vulnerable point of attack.

The time has arrived when the public needs to be informed as to what the real issue is, and it

is without doubt the plain duty of the medical profession to pull the mask off Christian science and other nonmedical sects with which it has showed a ready willingness to ally itself, and show to the public what the acceptance of their teachings would mean to the public welfare. Would any sane legislator vote to repeal our state and municipal health laws which provide for the organization of our health boards, and replace them by laws which embody the teaching and beliefs of Christian scientists, osteopaths and chiropractors? Yet followed to its logical conclusion, this is what our law-makers must be prepared to do if the representatives of these cults are permitted to have a voice in the formulation of our health laws and medical practice acts. If all disease is an error of mortal mind, or typhoid fever is caused by a misplaced vertebra, why guard the sources of drinking water from sewer pollution or build hospitals for the treatment of tuberculosis?

The real issue between the medical profession and the nonmedical sects is composed of those factors which society has acknowledged and stamped with legal approval as being necessary to modern civilization, such as hospitals, quarantine laws, pure food and drug laws, public school inspection, municipal sanitary regulation of various kinds; in fact, every truth which science has contributed to human life.

These fundamental truths which have been woven into our social and political fabric are denied by Christian scientists, osteopaths and chiropractors. Are they, then, to be regarded as safe advisors in the formulation of laws guarding the health of the public? Would any community tolerate a code of health laws and sanitary regulations based on the beliefs and conceptions of disease which these cults entertain? Imagine if you can the industrial and social chaos if the accumulated knowledge of fifty years of medical science were obliterated from the knowledge of mankind—if Pasteur had never made his discoveries of the bacterial origin of many diseases, if we had no knowledge of yellow fever, malaria, hookworm disease, typhoid fever, diphtheria or tuberculosis. The very basis of modern industrial and social progress is founded on the discovery of the cause and the control of the diseases which affect mankind. And yet our legislatures are lobbied regularly by representatives of these opposing cults, clamoring for a voice in the making of laws pertaining to the health of the public.

In a country dedicated to freedom of individual thought and action no one questions the political right to existence of any organization, regardless of its intellectual standards—that is

the new price of democracy—but when such organizations attempt to lay their untutored and prejudiced hands on the laws of the land, it becomes the plain duty of intelligence to interfere.

ARSENOBENZOL AND DIARSENOL, SUBSTITUTES FOR SALVARSAN

Every practicing physician is just now vitally interested in the question of a substitute for salvarsan. Since the supply of salvarsan in this country became exhausted we have been at a loss to know how to handle our cases of syphilis with as much confidence as formerly. Suffering humanity demanded that we get salvarsan or a preparation closely allied to it that could give therapeutic results like those obtained with the German salvarsan.

Experimental chemotherapeutic studies carried out in this country by Schamberg, Kolmer and Raiziss in the Dermatological Research Laboratories at Philadelphia have yielded a preparation that seems to answer this purpose. This preparation has been named "Arsenobenzol." It is an arsenic compound very closely related to salvarsan in its chemical structure.

This arsenobenzol and the German salvarsan were tested out on animals by these investigators, and it was found that the two preparations do not differ materially in their trypanocidal effect. The proper dose of each of these substances can produce a permanent sterilizing effect, the so-called "therapia sterilizans magna."

Clinically, arsenobenzol has been given intravenously by these men "over 175 times without any accidents whatsoever." The usual reaction, with such symptoms as headache, fever, chill, nausea and occasionally vomiting may occur, but promptly passes away. These observers believe that the results obtained with their preparation are indistinguishable from those obtained with salvarsan, and they state that several hundred doses administered by others have given results similar to their own.

Ormsby and Mitchell of Chicago have given 184 injections of this arsenobenzol to seventy-five patients, and from their experience with this drug they believe that "arsenobenzol, together with mercury, offers as good a method of treatment of syphilis as any heretofore used."

Unimpeachable evidence such as this establishes the fact definitely—if not conclusively—that we can now get an American preparation of salvarsan that seems to be just as good as the German product. If further experience will substantiate the belief that it is just as good in every way, our own preparation ought to crowd the German substance out of the American mar-

ket, for surely no truly American physician would prefer a foreign chemical to one made in the United States if it were no better than the latter.

Diarsenol is a new salvarsan preparation made in Canada. In the circular sent out by the producers it is stated that only diarsenol, which has been tested biologically in the laboratories of the University of Toronto under the supervision of Professors MacKenzie and McPhedran, is distributed for general use. It looks like the German salvarsan, it reacts like it and must be prepared just like it.

Up to the present only one clinical report on the use of diarsenol has been made. Abner H. Cook of Hot Springs, Ark., has given fourteen intravenous injections of diarsenol, and calls attention to the alarming symptoms caused after the last three injections he gave.

Much more experience with both of these new preparations will be awaited before final conclusions can be drawn. In the meantime, physicians should wake up to the fact that they can obtain now a salvarsan preparation made in America that seems to be as efficacious in curing syphilis as the German old salvarsan. In view of the striking results already obtained with arsenobenzol, this drug ought to be given a thorough trial in all cases of luetic infection requiring specific intravenous treatment.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

Do not fail to read the advertising pages. There you will find an announcement that interests you. Give THE JOURNAL credit.

WE haven't heard of any life insurance companies that have appointed Christian Scientists, Osteopaths or Chiropractors as medical examiners. Will the members and followers of the pseudo-medical cults please explain.

A FIVE-REEL moving picture illustrating the tuberculosis question has been produced by a company in Los Angeles. This reel is entitled "The Invincible Enemy," and tells a very long but deeply interesting story. We cannot give a synopsis for lack of space, but will note that this reel may be rented by tuberculosis associations from the E. K. O. Film Company, 729 Seventh Avenue, New York City.

THE *Lancet-Clinic*, under date of April 1, announces on its cover page a change of editorship, and with it further announcement is made to the effect that its advertising pages conform to the rules of the Council on Pharmacy and Chemistry of the American Medical Association. We are very much pleased to know that such a well-edited and influential weekly has joined the ranks of journals that propose to have clean advertising pages. Perhaps in time such periodicals as the *Medical Record*, and the *New York Medical Journal* will "see the light."

THE PREVENTION OF INSANITY is the title of a new health pamphlet which will soon be issued by the State Board of Health. This pamphlet first reviews the status of insanity in the state, giving statistics, cost, social relations, etc. The second part of the pamphlet relates to the causes of insanity and the third part is given up to what must be done to effect prevention. The causes of insanity are laid down as follows: 1. Heredity. 2. Syphilis. 3. Alcoholism. 4. Drug addiction and self-doctoring with "patent medicines." 5. Wrong diet and wrong eating leading to autointoxication.

ALL drugs and chemicals now cost from two to twenty times what they cost before the beginning of the European war. Gasoline has trebled in price during the last year, and bids fair to go very much higher. The cost of living is greater, and wages for nearly all kinds of work have advanced. In view of these conditions the doctor would be justified in raising the charges for services. In some communities doctors are charging the same as charged twenty-five years ago when prices on everything were about one-half what they are now. The doctor is entitled to larger fees than he is getting. Will he secure them? It is the doctor's move.

A NEW journal, the title of which is *The Journal of Laboratory and Clinical Medicine*, has made its appearance. It is edited by some well-known laboratory men and clinicians from various parts of the country, with Dr. V. C.

Vaughn, of the University of Michigan, as editor-in-chief. The C. V. Mosby Company, St. Louis, is the publisher, and the subscription price is \$3 per year. The aim of the journal is to give practitioners the results of research work so that he may apply the same in his daily work. In the hands of such a capable editor the enterprise should succeed and be very greatly appreciated by the medical profession.

THE federal government offers a number of positions as surgeons or assistant surgeons in the Army, Navy, or public Health Service, and candidates may obtain full particulars by writing the Treasury Department at Washington, D. C. Salaries range from \$2,000 to \$4,000 per year, the latter being given to assistant surgeon-generals. When quarters are not provided, commutation at the rate of \$30, \$40, and \$50 a month, according to the grade, is allowed. All grades receive longevity pay, 10 per cent. in addition to the regular salary for every five years up to 40 per cent. after twenty years' service. The tenure of office is permanent. Officers traveling under orders are allowed actual expenses.

THE secretary of the Posey County Medical Society sends out not only a rather unique announcement concerning meetings, but offers some food for thought to the man who thinks he is too busy to attend the medical society meetings. A notice sent to members is as follows:

The Posey County Medical Society will meet at Mount Vernon, Wednesday, Feb. 12, 1916, which is in Posey County, state of Indiana, and Dr. Doerr, on Obstetrics, will be the chief entertainer. Don't stay away because you haven't the time. Neither did Drs. Osler, Murphy, Sajous, Hare, Stimson and a hundred other medical men who "do things" have the time!

So let us get together, talk it over, and find out what the "other fellow" is doing.

DON'T BE A DRY NUT!

Maybe it's the Spark Plug, examine it!

THE warring nations of Europe, and even our own federal government, have absolutely no use for osteopaths, chiropractors, Christian Scientists, and all other pseudomedical cults when it comes to selecting men for army and navy medical service. In the name of all that is good and holy, what would these pretenders do in the field and reserve hospitals when the sick and wounded are coming in by the thousand, and

the government is demanding the highest type of efficiency in caring for them? And what about the sick or wounded soldier? Does he want any one babbling a lot of Mrs. Eddy's stuff to him, or will he permit some one to rub his spine when he has a serious gunshot wound or is suffering from some infectious disease? Indeed not. He wants a highly educated and thoroughly trained physician of the regular school, and not a "make-believe" doctor who knows little about anatomy and physiology, and still less about bacteriology and pathology. There seem to be a whole lot of people who, when there is not very much the matter with them, are willing to take up with any fad or fancy, but we notice that the majority of human kind, when really sick, want a real doctor. But aside from all this, the public should be interested in the creation and maintenance of a standard for medical practice just as it upholds standards for other things.

THE new Medical Practice Act of Wisconsin represents a step backward in progress. The law provides that "any person duly licensed to practice osteopathy in this state at any time prior to Jan. 1, 1916, shall be licensed to practice surgery, upon passing the regular examination of the board in surgery, and presenting evidence of having completed an adequate course in surgery at a reputable school or college of osteopathy and surgery, requiring not less than twenty months actual attendance thereat." Is not that "letting down the bars" for those who want to take a short cut to legal permit to practice surgery? The law also exempts chiropractors, providing each and every one of them hangs in his office a sign which says "not registered or licensed in Wisconsin." Christian Science healers also are exempt, and the law goes a step further and says that no person who selects Christian Science treatment for the cure of disease shall be compelled to submit to any form of medical treatment. Is not this an evidence of the cunning work of the League of Medical Freedom?

It is a sad commentary on justice and progress when those who practice regular medicine are required to have two years of college education and four years of medical school work before being permitted to practice medicine in Wisconsin, only to be put into competition with a lot of pretenders and incompetents recognized by the laws of Wisconsin.

THE surgeon who is cautious will inform himself as to the habits of his patient who is to

have a serious surgical operation. If the patient is an habitual user of tobacco or alcohol, it is bad practice to cut off entirely the stimulants to the effect of which the patient is accustomed, for such efforts disturb the normal condition of the patient, and therefore increases the risk of bad results from the operative attention. Every surgeon of experience can recount cases of post-operative nervousness and even delirium which have been traced to the withdrawal of alcoholics or narcotics from an addict. The Editor of *THE JOURNAL* has had several experiences of that kind, and a recent one is rather instructive. An aged patient, long a user of alcoholic beverages, but who denied the fact, was operated uneventfully for senile cataract. For twenty-four hours prior to the operation the patient was confined in the hospital where he received no alcoholic stimulants. Twelve hours after the operation he developed violent mania requiring a straight jacket for control. On the supposition that withdrawal of alcoholics might be responsible for his condition, whisky in moderation three times per day was ordered, and within a few hours the patient was not only rational and quiet, but continued to give no further trouble from that time until his dismissal from the hospital ten days later. Fortunately the dressings had not been disturbed, and fortunately no ill effects occurred as a result of the violence. The incident, however, was not without its lesson.

No less than eight states enacted state wide prohibition laws in the year which ended Jan. 2, 1916. These states were: Alabama, Colorado, Iowa, Washington, Oregon, Idaho, Arkansas and South Carolina. In Virginia the law becomes operative in 1916, and this will make a total of nineteen states which have adopted state wide prohibition up to the present time. In this connection it will be interesting to note that the consumption of alcoholic beverages amounts to about 22 gallons per capita annually in the United States. The total value of alcoholic beverages consumed in the United States annually is not less than \$2,200,000,000. In 1850 the consumption of alcohol was about 4 gallons per capita per annum, and rose rapidly to 22 gallons in 1910. In several of the prohibition states provisions have been adopted which require the recording of all purchases and sale of alcohol for whatever purpose it may be designed. In Washington shipments of intoxicating liquors are to be made only on a permit issued by the county auditor. In Iowa common carriers must keep a record of all shipments and deliver to

consignee only. In North Carolina permits for the purchase of alcohol must be secured from the clerk of the superior court. In Tennessee the law restricts the amount of intoxicating liquor that may be carried by druggists, which is 1 per cent. of the capital returned for taxes. In Colorado the law limits purchases for alcoholic liquors to written orders on blanks supplied by the secretary of state. In North Dakota it is unlawful to receive or receipt for intoxicating liquors not consigned to the party receiving them. It is only a question of time, and a short time at that, when we shall have nation wide prohibition.

SOME doctors are inclined to look on the firms that manufacture chemicals and biologic products as being so steeped in commercialism as to lose sight of the scientific side of their business; and, while it is true that some of the firms catering to physicians' wants will bear watching, yet we feel that there are some firms that deserve great credit for the highly scientific and conscientious manner in which they have attempted to aid the medical profession through the development and manufacture of new pharmaceuticals and biologic products that are efficient and trustworthy. One cannot visit the laboratories of such firms as Parke, Davis & Co. of Detroit, H. K. Mulford Company of Philadelphia, and Eli Lilly & Co. of Indianapolis, without being impressed with the high grade of scientific work that is being done at those laboratories and the comparative freedom from sordid commercialism that there exists. So many scientific facts and so many improved therapeutic methods have come from the trained workers in these laboratories that the medical profession really owes such firms a debt of gratitude, apart from any remuneration that may be given in the way of patronage which is the ultimate end desired by these firms. What is being done by these large concerns also is being done, perhaps in a more limited way, by such concerns as the Sherman laboratories, and a half dozen other well-known firms that might be mentioned. Perhaps, too, it is true that these firms oftentimes overstep the bounds of propriety in their efforts to push the sale of their wares, to say nothing of exaggerating the claims as to efficiency of certain products, yet on the whole they deserve an immense amount of credit for refinements in therapeutics and for no little original scientific work, which but for them we would not have to aid us in our every-day work.

DEATHS

EDGAR LANGSTON, M.D., Pt. Isabel, died March 10, aged 84 years.

SAMUEL D. HAZARD, M.D., died March 27, at Jeffersonville, aged 53 years.

WILLIAM M. MCGRAVRAN, M.D., Knightstown, retired, died March 15, aged 88 years.

MARY INA WICKHAM, wife of Dr. William A. Wickham, South Bend, died March 16, aged 45 years.

HANNAH V. CHENOWETH, widow of Dr. John T. Chenoweth, Winchester, died March 16, aged 80 years.

ERNAN A. BUSH, M.D., Reynolds, formerly of Delphi, died March 10, at Central Hospital, Indianapolis, following several weeks' illness.

HARRY M. GOTTMAN, M.D., Evansville, died at Asheville, N. C., March 8, following an illness of several weeks from pneumonia. He was graduated in medicine from Kentucky in 1905, was a member of the Vanderburgh County Medical Society and the American Medical Association.

HIRAM M. ASPEY, M.D., Geneva, died February 28 at St. Joseph Hospital, Fort Wayne, aged 65 years. Dr. Aspey was born near Geneva in 1850, obtained his early education in the district schools, and entered Miami Medical College, Cincinnati, from which he graduated in 1876. The remainder of his life was spent at Geneva in the practice of his profession. He was a member of the Indiana State Medical Association.

GEORGE L. IRELAND, M.D., Winslow, died March 16 following a brief illness from pneumonia. Dr. Ireland was born in Gibson County March 8, 1858, read medicine in the office of his uncle at Francisco and graduated from the Indianapolis School of Medicine in 1881. In 1882 he began the practice of medicine at Winslow in partnership with Dr. David DeTar, which partnership held for fourteen years, since which time he has built up a large private practice. He was a member of the Indiana State Medical Association.

EDWIN WILLIAM POINIER, M.D., Huntington, died March 6, aged 37 years. Dr. Poinier was born in Chicago in 1879, graduated from Phy-

sicians and Surgeons Medical College in 1902, served as intern in the West Side Hospital and located at Andrews in 1903, where he practiced for twelve years. Early in 1915 he returned to Chicago and was assistant surgeon to Dr. William Schroder at Wesley Hospital, later locating in Huntington, where he again engaged in private practice. He was a member of the county, state and American Medical Associations.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

GENERAL

BORN to Dr. and Mrs. O. H. Stewart, Aurora, March 15, a girl.

DR. PURL PLASTERER, formerly of Indianapolis, has located at Rising Sun.

DR. WILLIAM G. SWANK, formerly of Crawfordsville, has located at Indianapolis.

BORN, to Dr. and Mrs. A. A. Young of Hammond, on March 10, a 9½-pound boy.

DR. J. R. NEWCOMB, Indianapolis, is attending clinics in Philadelphia.

DR. AND MRS. H. M. HOSMER, Gary, are taking an extended trip through the East.

DR. E. A. BUSH, Reynolds, has been declared insane by the Tippecanoe county court.

DR. HARRY E. SHARRER of Hammond spent part of the month of March in the South.

THE Sixth District Medical Society meeting will be held at Cambridge City on May 25.

DR. W. S. BRYANT, Dale, recently underwent a surgical operation at the hospital at Evansville.

It is reported that cholera has again broken out in thirty-seven towns and villages in Austria.

DR. AND MRS. J. D. SOURWINE, Brazil, have returned from Pensacola, Fla., where they spent the winter.

DR. FRANK G. KELLER, Alexandria, was operated on March 11 at the Methodist Hospital, Indianapolis.

THE Kendallville Medical Society has purchased a property in that city and will equip it for a hospital.

DR. N. A. JAMES, Tell City, has been appointed local surgeon of the Southern Railway Company.

DR. I. W. SHORT of Elkhart has let the contract for the building of a three-story business block in that city.

DR. W. S. CAMPBELL of Lafayette has accepted a position with the Standard Laboratories Company of Chicago.

DR. CLYDE R. NETHERTON of Clark's Hill was married on March 23 to Miss Blanche Bryant of the same place.

DR. F. E. RAY of Shelbyville has been appointed to succeed Dr. B. G. Keeney as jail physician for Shelby County.

THE physicians of Kokomo have united in the plan of closing their offices on Tuesday and Thursday nights of each week.

DR. AND MRS. C. M. SMETHERS of Spiceland are making an extended visit in San Francisco and other points in California.

THE Jasper County Council has appropriated \$8,000 more, making a total of \$19,000, for the erection of a new county hospital.

DR. J. M. MILLER, Decatur, is in New York City taking a six-weeks' course of postgraduate work on the eye, ear, nose and throat.

DR. M. E. RAFACY, formerly intern of St. Margaret Hospital, Hammond, also city chemist of Hammond, has recently located at Dyer, Ind.

THE contract for the Marion County Tuberculosis Hospital has been let to J. F. Wilde & Co. Work will be pushed on this building.

DR. D. S. WIGGINS and wife of New Castle have returned home from an extended visit in New York City, Philadelphia, Boston and New Orleans.

THE trustees of Columbia University, at a meeting on March 6, voted to admit women as students in the College of Physicians and Surgeons.

DR. J. N. HURTY, Indianapolis, addressed the Commercial Travelers' Association at Terre Haute on March 25, using for his subject "Men Who Think."

AT the recent meeting of the American Life Convention, held at Birmingham, Ala., Dr. Frank W. Foxworthy of Indianapolis was elected president.

DR. FRANK J. LUTZ of St. Louis, a member of the Board of Trustees of the American Medical Association and a prominent surgeon, died March 24, from heart disease.

THE Madison Crusaders of the Anti-Tuberculosis Society of Indiana held two important meetings at Anderson on March 28. Dr. Alfred Henry of Indianapolis was the speaker.

DR. W. C. CHAFFEE of Huntington celebrated on March 1 the fifty-sixth anniversary of his practice of medicine, and on April 2 he celebrated his eighty-first birthday anniversary.

DR. L. C. WARNSHUIS, editor of the *Journal of the Michigan State Medical Society*, has been appointed chief surgeon of the Pere Marquette Railroad, with offices at Grand Rapids.

DR. J. J. SWEETLAND of Constantine, Mich., was killed in an automobile accident on March 7 while returning home from Elkhart, where he had been operating at the General Hospital.

THE St. Joseph Hospital at South Bend is finishing off the third floor of the building, equipping eight new private rooms, serving room and a large ward. Work is to be completed by May 1.

DRS. W. A. HOLLIS AND C. W. COREY of Hartford City are taking an eight weeks' course in the New York Post-Graduate School—Dr. Hollis in eye, ear, nose and throat work, and Dr. Corey in surgery.

THE dentists of Indianapolis have formed a new organization and applied for a charter for same as a branch of the Modern Ethical Dental Society of Indiana. Dentists of Terre Haute also have organized a similar society.

DR. GEORGE B. DETAR has sold his interests at Richland City, Spencer County, and hereafter will be associated in the practice of medicine with his father, Dr. David DeTar, at Winslow. They will occupy the offices of the late Dr. Ireland.

THE health officers of the Thirteenth District—Elkhart, LaPorte, Kosciusko, St. Joseph, Marshall, Fulton and Starke counties—held a meeting at Goshen on March 22, and were addressed by Dr. W. F. King of the State Board of Health, Indianapolis.

DR. C. C. BASS, Tulane College of Medicine, New Orleans, has been appointed head of a group of scientific workers to study malaria in Mississippi under the direction of the International Health Commission. Dr. W. S. Leathers of the Health Department of Mississippi will be associated with him.

THE food and drug inspectors of the state met at Indianapolis March 16 and organized what is to be known as the "Indiana Health Inspectors' Association." Dr. Butler of Indianapolis was elected president; Harry Truitt, Columbus, secretary, and A. W. Hedrick, East Chicago, vice president.

THE Chicago Laboratory, 25 East Washington Street, Chicago, offers to send Indiana doctors, free of charge, some interesting booklets on the newer aspects of blood examination, the complement-fixation test, and Abderhalden's serodiagnosis. Those who are interested are requested to write for the booklets.

A COURSE of six lectures on Military Administration, Medicine and Surgery are being given at the Columbia University College of Physicians and Surgeons, New York, each Tuesday, beginning March 28. The lectures are given by Maj. Joseph H. Ford, Maj. Sanford H. Wadhams, Capt. Philip W. Huntington, Lieut.-Col. W. S. Terriberry, all of the Medical Corps, U. S. Army. The course begun March 28 and the lectures are held each Tuesday until May 2.

THE H. K. Mulford Company have issued a bound volume containing colored photographs, made by the Lumiere's process, giving representations of the Mulford laboratories and describing in considerable detail the work in the field of immunology as portrayed by the illustrations. The book is of unusual interest to physicians. Copy may be obtained by writing the Mulford Company.

THE St. Joseph County Dental Association recently had the physicians of the county as their guests at a banquet at the Oliver Hotel, South Bend. Dr. William H. G. Logan of Chicago gave the address of the evening on "Points of Diagnosis of the More Important Diseases of

the Mouth That Are of Interest to the Medical and Dental Profession." Following the address the discussion was led by three physicians, Drs. E. J. Lent, J. B. Berteling and S. A. Clark, and three dentists, Drs. R. R. Gillis, Clem Shidler, J. A. Stoeckley.

DURING March the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

Radium Limited, U. S. A.: Saubermann Radium Emanation Activator, 5,000 Mache units, 10,000 Mache units, 20,000 Mache units, 50,000 Mache units.

Standard Oil Company of Indiana: Stanolind Liquid Paraffin.

Knoll & Co.: Styracol Tablets, 5 gr. Tannalbin Tablets, 5 gr.

IT is announced that appropriations amounting to \$1,200,000 have been made by the Rockefeller Foundation as follows: For additional endowment needed in connection with the Department of Animal Pathology, \$1,000; for the cost of medical research and such medical supplies and services as the Rockefeller Institute for Medical Research may appropriately furnish at the seat of war in Europe, \$25,000; for additional property adjoining the Union Medical College in Peking, \$125,000. Martin Antoine Ryerson, Chicago; Rev. Harry Emmerson Fosdick, Montclair, N. J., and Frederick Strauss, New York, have been elected to the board of trustees of the foundation.

THE *Ophthalmoscope*, published in London and edited by Sir Sidney Stevenson, probably will be discontinued unless the American ophthalmologists come to the rescue. The *Ophthalmoscope* is one of the very best ophthalmologic journals published, and it will be a real loss if, as a result of the European war, publication ceases. We therefore urge our Indiana ophthalmologists to subscribe for the *Ophthalmoscope*, and subscriptions may be sent to Dr. Wendel Reber, 1212 Spruce Street, Philadelphia, or the Editor of THE JOURNAL will transmit subscriptions to the London office. The subscription price is \$5 per year in advance.

IN accordance with preliminary announcement made in *The Journal of the American Medical Association* previous to the last A. M. A. convention, the American Medical Golfing Association held its first tournament in

San Francisco, June 21, 1915. Arrangements were then made for the organization, and that is now complete, with the following directors: president, Wendell C. Phillips, New York, vice president, James Eaves, San Francisco; secretary-treasurer, Will Walter, Chicago. Plans are now being made for the second tournament to be held in Detroit at the forthcoming A. M. A. convention in June. All Fellows of the A. M. A. who play the game are eligible and may obtain the desired information from the secretary-treasurer, Dr. Will Walter, 122 S. Michigan Boulevard, Chicago. Members of the British Medical Association have a similar organization for play at their annual meetings, and it is thought that this will add materially to the social interest of the A. M. A. as it has to the B. M. A. conventions.

PUBLIC HEALTH

THE University of Missouri has established a Department of Preventive Medicine which will work in cooperation with the State Board of Health. The notice says: "The Department of Preventive Medicine is a bureau of information and will, upon request, furnish to the citizens of Missouri practical information concerning the prevention of disease. A laboratory has been provided and the services of the University are free." The professor in charge is Dr. Mazyck Ravenel. Dr. Ravenel was formerly professor of bacteriology in the University of Pennsylvania, later went to the University of Wisconsin and is now at the University of Missouri.

THE Nevada State Board of Health is strongly empowered, as witness the following penalty for violation of the regulations of the State Board; Penalty—For refusing or neglecting to comply with any regulations of the board within five days after having received notice in writing, the offender shall be fined not less than \$100 nor more than \$500, or he shall be imprisoned for not less than fifty nor more than 250 days. It is herewith made the duty of sheriffs and all peace officers to assist the board in enforcing all rules, regulations and requirements promulgated by the board." All of this is in a very great degree nullified by a provision, evidently gotten into the law by the politicians, which gives power to the governor at any time to change the entire board, including the secretary and state health officer. If this does not neutralize entirely the good effects which should proceed from a public health law, it will be strange indeed.

SOCIETY PROCEEDINGS

INDIANAPOLIS MEDICAL SOCIETY

Meeting of Jan. 25, 1916

Meeting was called to order at 8:15 p. m., by the president. The minutes of the previous meeting were read and approved.

The secretary announced that the annual contribution of \$50 for medical magazines in the Mears Collection of the Indianapolis Public Library had been received from Mr. J. Ewing Mears of Philadelphia, and that this money had been turned over to the librarian.

A communication from the Committee on Mental Defectives, which committee was appointed by Governor Ralston, was read. No action was taken.

Dr. Clark Rogers, a former member of the Cass County Medical Society, was admitted as a member in good standing of the Indianapolis Medical Society. The application of Dr. August Omer Truelove was read for the second time and referred to the Judicial Council.

PROGRAM

Mr. Howe Landers, secretary of the Industrial Board gave an address on the provisions of the "Workmen's Compensation Law as Affecting the Practice of Medicine."

ABSTRACT OF MR. LANDERS' TALK

The compensation law is a remedy for existing industrial and social conditions as regards labor. Previously an employee could not recover unless he showed the employer was at fault. There are only two classes of persons to be considered under this law—the employer and the employee. A workman must be injured in the course of his regular employment. This law does not apply to farmers, domestic employees nor to the casual laborer. By this latter is meant an employee not employed in the usual course of the trade, business or profession of the employer. This definition shows us that physicians are classed as employers and consequently are responsible to their employees. Either employer or employee may reject this compensation law, but in such a case must file written notice with the industrial board and notify the second party. The rejection of this law does not apply until thirty days after notice has been filed.

The injured workman is to receive immediate medical or surgical attention and it is incumbent on the employer to take active steps to get that attention for the employee. A reasonable charge is to be made for this attention, which means a charge such as would be made for a person in similar financial circumstances—as though he were paying it himself. The knowledge a physician may have concerning a certain case must be disclosed to the industrial board if the board asks for this information. In this provision we see that the communication of a physician with his patient is no longer secret and privileged, if the case comes under the compensation law. Fees of physicians, attorneys and hospitals are subject to the approval of the industrial board.

An examination of the provisions of similar laws in other states shows that practically all of them have set a limit on the fees for medical or surgical atten-

tion, while in Indiana there is no limit stated. A study of about 10,000 cases coming under this law shows that 85 per cent. of the cases are not incapacitated long enough to get compensation.

DR. OLIVER: Have any railroads accepted this law?

MR. LANDERS: Yes, practically all of them except the Pennsylvania. However, the law does not apply to any one engaged in interstate commerce. If an employer adopts any plan other than the state law, his plan must meet the requirements of the state compensation law. Insurance companies and employers are obligated to pay for medical service.

DR. DEHASS: Must an employee of necessity accept the physician his employer chooses?

MR. LANDERS: An employee must accept the medical service offered by his employer unless the employee can show the industrial board there is a good reason for rejecting the services.

DISCUSSION

DR. SOWDER: The attitude of the insurance companies and their fee schedules are the two things which brought most of us here tonight. There are two questions which arise in our minds: (1) What is the attitude of the industrial board toward the surgeons employed by insurance companies? (2) Is it not true that the reason the board has not had claims to adjudicate is because physicians have signed fee schedules for insurance companies? These questions must be considered and a proper solution worked out. It is time for the local medical society to clean house and take a stand on this matter.

DR. OLIVER: The remedy for this problem is in the hands of this medical society. Every man of the society should agree to be governed by the rules of the society. We should either set a schedule of fees for the members of this society or each man should have his own schedule of fees, regardless of the schedules of insurance companies.

DR. NEIER gave an instance of an insurance company withholding payment until they received a receipted statement from the physician.

DR. DEHASS cited a case in his own practice.

DR. FOXWORTHY mentioned a case at Muncie in which a charge of \$1 for each surgical dressing was considered exorbitant.

MR. LANDERS (closing): This law has nothing to do with fee bills or fee schedules. Physicians in their charges are bound only by the terms and provisions of the act itself.

A motion to thank Mr. Landers for his kindness for explaining the law and its application was passed unanimously.

Meeting adjourned.

Attendance, 103.

Meeting of Feb. 1, 1916

The meeting was called to order by the president at 8:15 p. m. The minutes of the previous meeting were read and approved.

Dr. August Omer Truelove's application having been favorably considered by the Judicial Council, he was elected a member of the society.

The president asked Dr. John N. Hurty to introduce the speaker of the evening, Dr. Charles Wardell Stiles, Surgeon and Professor of Zoology in the U. S. Public Health Service. Dr. Stiles' subject was "Some Medical Problems of the South."

ABSTRACT OF DR. STILES' TALK

The population of the United States is a homogeneous one—four different species, the white, black, yellow and red man. Originally they came from four different continents with different soils and climates, which two latter things have much to do with disease. Therefore different races have diseases peculiar to themselves. Four different races in the same country constitutes a biologic paradox. Biology is governed by the law "Survival of the fittest." Therefore racial competition develops along two lines, (1) economics, (2) medical.

We shall consider the medical competition first. Typical diseases of Asia are the fluke diseases, lung and liver fluke and Asiatic intestinal bilharziosis. Those belong to the yellow man. Negro is a tropical animal and therefore has tropical diseases—malaria, hookworm disease. Cochinchina diarrhea and amebic dysentery are tropical diseases and belong to the negro. White man from Europe, black man from Africa and yellow man from Asia brought the various diseases from their respective continents and in our country these diseases were mixed. A mixture of the white and black races in the Gulf Atlantic states gives the diseases of Europe and Africa.

It is a biologic principle that a race virgin to a disease will be more severely affected than the race from which the disease originally came. Tuberculosis is not a slave disease nor are gonorrhea and syphilis. Slaves were too valuable and infected slaves were promptly isolated to prevent spreading of disease. Venereal diseases were spread among the negroes by the whites. Sanitary standards of races differ. Systematic examination of whites' homes showed 35 per cent. without privies; negroes' homes showed 80 per cent. lacking. Therefore the spread is great of negro diseases by soil pollution. The following table of statistics on typhoid fever shows difference:

Section	Per Cent. Negro Population	Cases Per 100,000 Population
Whole country	11.0	45.0
One third northern states....	0.4	25.51
Another one third northern states	2.5	39.25
One third southern states....	32.0	72.7

ECONOMIC COMPETITION

When the white and negro come into competition the white man's standards are lowered. Pellagra statistics show 32.3 cases per 100,000 in whites against 78 per 100,000 in blacks. This shows a difference in food standards and economic standards.

"Poor whites" of Southern states have lowered standards to compete with blacks. Having lived with these people in their homes and in cotton mill surroundings, I know them and appreciate their conditions. Those without money competed with slave labor and had to meet slave medical problems and contracted slave diseases because they paid the penalty of bringing two different races together. Gentlemen, this cannot be done. "Poor whites" are the ones who carry the burden of a 32 per cent. population. The cotton mills have been friends of "poor whites." It has given them something to do. The child labor problem in the South is a great one. Conditions are bad, but better in mills than at homes in

the country. Sanitary index of ninety mills showed twenty-seven on basis of 100; sanitary index of 250 homes showed 6.3 on basis of 100. Therefore let the family go to the cotton mills and thereby decrease disease and death rate. Those in the mills have the advantage of getting away from a sanitary index of 6.3, which is all that the country with its soil pollution offers them.

The child from an educational viewpoint, has no chance for education on soil-polluted farms. He gets an education on how to live while at the mills. This is the medical viewpoint of child labor in the South and has been developed from a study of more than 150 mills. Do not force the child out of the mills until something better than a sanitary index of 6.3 is offered him. The sad part of a mill village life is the deserted girl. Marriage has been too easy. Twenty-one out of thirty girls in one room had been deserted by their husbands. This condition has been remedied by a recent law requiring a marriage license.

The race problem is a most important matter in the South. The solution is the survival of one or the other race. Medical factors are tuberculosis, infant mortality, typhoid fever, gonorrhea, syphilis and drugs. These are making great inroads on the negro race. Economic factors include supplanting of negro by whites in many and varied capacities and a marked desire in the South for race segregation. Mingling of races lowers social standards. I favor segregation on medical grounds aside from economic grounds.

The white race is a reservoir for tuberculosis. The negro dies earlier, consequently this disease runs through. The white live longer and therefore spread disease more. Malaria is carried by the blood. Segregation would prevent this disease being carried to whites.

ANDERSONVILLE STOCKADE

The starvation of 15,000 Union soldiers in this stockade has always been a thorn in the side of both North and South. Investigation shows this region lies in the thickest part of hookworm disease territory. Sanitary conditions always bad. A physician, whose father was an army surgeon at Andersonville, has authenticated a rumor that ground itch, the first symptom of hookworm disease, was prevalent in the stockade in 1864. Tibial ulcers, a concomitant symptom, were very common also. There is no doubt but that the high death rate at Andersonville was due to an "explosive epidemic of hookworm disease."

If this be correct it is time to stop talking about the Andersonville stockade both in the North and in the South. Further to be noted are the following facts: Fifty per cent. of the rural homes have no privy; 50 per cent. of women and children of the South are living under Andersonville conditions, and 50 per cent. of the farms have Andersonville surroundings.

There is one marked difference in conditions then and now: Then the human sacrifice was paid by men who voluntarily undertook the work of war. Now the women and children are paying the toll.

Hereafter let us not refer to Andersonville as a sectional matter because there is a medical explanation.

Dr. Stiles was thanked by the president of the Society for his excellent and instructive talk.

Meeting adjourned.

Attendance, 89. L. H. MAXWELL, Secretary.

Meeting of Feb. 8, 1916

Meeting was called to order at 8:15 by First Vice President Erdman. In the absence of the secretary, Dr. I. C. Barnes was appointed acting secretary. The president appointed the following committee to prepare resolutions on the death of Dr. John M. Kitchen: Drs. A. W. Brayton, George J. Cook, O. G. Pfaff, G. V. Woolen and E. F. Hodges.

PROGRAM

Case Report: "Pathologic Report of a Case of Juvenile General Paresis," Dr. F. C. Potter.

This case was presented clinically to the society, May 19, 1914. Death followed a series of convulsions lasting more than sixty hours. Necropsy, thirteen and a half hours postmortem. The viscera presented the following gross pathologic lesions: Circulatory system: Pericardial effusion; chronic pericarditis; eccentric hypertrophy and dilatation of heart; chronic fibrous valvulitis of the mitral valve; fatty infiltration of the heart muscle. Respiratory system: Interlobular pleuritis; early bronchopneumonia. Alimentary system: Chronic perihepatitis; chronic venous congestion of the liver. Genito-urinary system: Chronic capsulitis of the kidneys; acute tubular nephritis; juvenile genitalia. Glandular system: Remains of fetal lobulation of the spleen; chronic perisplenitis; chronic trabecular splenitis; peribronchial adenitis. In the microscopic study of sections from heart, liver, kidney and spleen, stained by Noguchi's modification of Levaditi's method, *Spirocheta pallida* were found in the connective tissue and adventitia of some of the blood vessels.

The following gross and microscopic lesions were found in the nervous system: Chronic osteosclerosis; chronic pachymeningitis; edema of the subarachnoid space; congestion of the cerebral vessels; chronic leptomeningitis (frontal and parietal); granular ependymitis of the fourth and lateral ventricles; atrophy of the frontal convolutions; perivascular infiltration throughout cortex; cerebral endarteritis with proliferation of capillaries; loss of cortical cell layer stratification; degeneration of cortical nerve cells; *Spirocheta pallida* in cerebral cortex; glial proliferation; degeneration of Purkinje's cells of cerebellum; double nucleated cells of Purkinje; chronic hypertrophic cervical pachymeningitis; chronic leptomeningitis of cord; perivascular infiltration; degeneration of anterior horn cells; degenerated fibers in crossed pyramidal tracts, Lissauer's tract and posterior root zone; degeneration of fibers of left optic nerve.

CASE REPORT

"Mediastinal Carcinoma and Complications," Dr. W. T. S. Dodds. Mrs. P., aged 38, farmer's wife, referred to me by Dr. Cotton of Goldsmith, Ind., for a possible tubercular involvement following a breast amputation three years previous. History illustrated that Dr. Sutcliff had operated on this patient three years previous, removing the entire left breast and that the pathologic findings were those resembling carcinoma. Apparent recovery until April, 1915, when referred to me. Fluoroscopic examination revealed clearly a large shadow which was circumscribed and extended from the third interspace, median line right, up to the clavicle and across to the first third of the left clavicle down to the second interspace on the left side. There were marked adhesions from the

mediastinum to the pericardium and the diaphragm especially on the right side of the diaphragm, to such an extent that she complained of liver pains. The microscopic examination of the expectoration was negative to tubercle bacilli on repeated examinations. There was great cachexia, dyspnea and orthopnea. Deglutition extremely difficult unless in an extreme forward position. The patient in desperation, thinking her condition must be tubercular, and that there must be relief, insisted on some form of treatment, and I suggested to her physician the deep Roentgen penetration. This was followed out with remarkable improvement until the extreme weather prevented her from returning to the office for treatment. February 1, Dr. Cotton called me and said that Mrs. P. awakened from a comfortable night's rest to find that her left leg was fractured at the surgical neck. There had been no indication other than lameness preceding this particular instance and there had been no trauma during the night to produce it. These are contradictory pathologic findings when we consider lymphatic glandular structure destroyed by carcinomatous cells and have a pathologic fracture of the surgical neck of the femur. It is interesting to know that writers look on most mediastinal neoplasms, outside of tuberculosis, as sarcoma. I could give, as you well know, the authors I refer to. I am inclined to look upon the first as a secondary carcinoma of the mediastinum following the proven carcinoma of the breast; the pathologic fracture a complication due to sarcoma.

CASE REPORT

"Acute Appendicitis with Spontaneous Evacuation of Pus into Bowel, Following Acute Tonsillitis," Dr. A. S. Jaeger. Mr. M., farmer, aged 29, married. Past history negative except some cardiac pain fifteen years ago. Since that time apparently well. Had a moderately severe attack of acute tonsillitis in November, 1915. Seemingly recovered by Dec. 1, 1915. December 8, complained of pain in right lumbar and iliac regions with slight chill. I first saw him December 10, at which time pain was localized in appendiceal region.

Examination was as follows: Well-nourished individual. The throat showed red fauces, but no enlargement or inflammation of tonsils. Tongue coated. No sordes. Heart slightly enlarged with distinct accentuation of first sound, otherwise normal. Pulse 80, with slightly increased tension and of moderate volume. Rectal temperature at 4 p. m., 100.8 F.

Abdomen was moderately distended and tympanitic. Spleen normal and liver somewhat tender. Percussion showed dullness, 2 inches below and 1½ inches to right of umbilicus, and extending to the right and upward toward the back. Firm pressure over appendiceal region elicited sharp, acute pain. Bowels sluggish. Treatment: Bowels thoroughly cleansed and ice bag intermittently to lower right abdomen. Following morning abdominal condition improved, rectal temperature 99 F. and pulse 60. In afternoon temperature 101, pulse 70, patient uncomfortable. Blood examination showed three negative widal reactions in next ten days. White count, 13,000; hemoglobin, 85. Tentative diagnosis of catarrhal appendicitis with possibility of typhoid infection. Patient refused operation, which was not strongly advised on account of the problematical diagnosis and cardiac condition. Slight improvement within next few days. Blood culture on December 15 showed an attenuated form of streptococcus. White count, 12,000; hemoglobin, 85. Symp-

toms gradually disappeared, although an area of tenderness was noticeable on deep pressure around McBurney's point. Reported at office Jan. 5, 1916, feeling well, although weak and with some appendiceal tenderness. Reported January 25 that on January 19 while at stool he felt a tugging of no great severity in the midline of abdomen slightly below umbilicus. This was followed by the expulsion of some gas and about a "wine glassful of pus mixed with mucus and blood." Gave no history and examination showed no evidence of rectal or anal disorder. Reported February 3 with normal temperature and pulse and gaining strength. Some slight discomfort in right inguinal region. Case tends to prove Rosenow's theory of an appendicitis following a systemic invasion through the tonsil. The writer is a firm believer in early operation in acute appendicitis, but feels one must judge the individual case. The case was the exception which proved the rule, for it emphasized the latent danger always present when removal of an acutely inflamed appendix is delayed.

Dr. A. W. Brayton gave a short talk on Dr. W. W. Keen and Edward Everett, which dealt with anesthesia.

CASE REPORT

"Mastoid Suppuration Without Tympanitis," Dr. W. S. Tomlin.

The case reported was one with mastoid suppuration shown at operation on a middle-aged woman who gave no history whatever of tympanitis. She had suffered severely for the past ten years with pain over that side of the head centering in the mastoid process and was becoming a physical wreck from the attendant loss of rest and nutrition. *

The diagnosis of these cases even after the process of exclusion is sometimes quite difficult and may demand exploratory opening, as in this case when a Roentgen Ray was temporarily impracticable. Literature on the subject is scant, some of the best textbooks making no mention of the subject. It may be confounded with neuralgia or the pain of sclerosing bone; however, the latter will be relieved just as readily by operation. Temperature is usually subnormal and general health is modified by septic absorption, loss of sleep and disturbed nutrition. Operation affords the only lasting relief.

Dr. Sterne, in commenting on Dr. Potter's report, made the point that (1) syphilis is always constitutional, tending to show extreme nervous pathology; (2) tabes and paresis are always syphilitic; (3) all the organs of the body show signs of syphilis; (4) treatment should always be directed to the nervous system in all cases of syphilis; (5) Dr. Potter's case held out no hope as to treatment.

Dr. Barnhill referring to Dr. Tomlin's case: Such cases thought impossible twenty years ago. Dr. Harris reported cases of his own. Dr. Crockett reported several cases, also Dr. Stucky, which shows the condition is not so rare. Ten years ago Dr. Barnhill saw his first case, which showed extreme pain. Patient had to be restrained by a nurse. Roentgen Ray showed nothing. The mastoid was opened. Blood-clot dressing was used and patient got well. The causes may start from ethmoid cells, sphenoidal cells and extend to attic ganglion. Nearly all get well under a mastoid operation. No case should die. Mastoid operation is safe and should be done even if no pus is present.

Meeting adjourned.

Attendance 47. I. C. BARNES, Acting Secretary.

Meeting of Feb. 15, 1916

The meeting was called to order by the president, Dr. A. B. Graham, at 8:15 p. m. The minutes of the previous meeting were read and approved. The applications of M. J. Shiel, R. J. Anderson and John Stark were read for the second time and referred to the council. Dr. Eastman moved that steps be taken to dispense with reading of interminable minutes. Motion was carried. The secretary presented an invitation from the Hoosier Motor Club to the Medical Society to attend a meeting at the Claypool Hotel following the society meeting.

A letter from Dr. J. Ewing Mears, of Philadelphia, was read by the secretary and referred to the council.

PROGRAM

Paper by Dr. Will Shimer: "Theory of Acidosis."

1. Carbon dioxid is the most important end product in catabolism. This substance dissolved in the blood forms carbonic acid, which unites with sodium to form carbonates and bicarbonates.

2. Carbon dioxid is eliminated by the lungs and the sodium unites with the acids in the capillaries of the lungs to form neutral salts.

3. Many of the inorganic acids, such as sulphuric, unite with the calcium and magnesium of the food products and are excreted in the intestines as neutral salts.

4. Phosphoric acid is eliminated by the kidneys as acid phosphates and more or less of the base saved for future neutralization of the acids.

5. Excess of acids are also neutralized by ammonia production.

6. Acidity of blood decreases the carbon dioxid and oxygen-carrying powers of the blood. Acidity also increases the respiratory movements.

7. Lack of oxygen supply to the tissues leads to the formation of lactic acid instead of carbon dioxid. Lactic acid uses up the bases of the blood, is difficult to eliminate and cannot be eliminated except as a neutral salt so that the basic substance is lost to the body, thus still further lowering the alkalinity of the blood.

8. Acidosis is not a simple decrease in the alkalinity to the blood, but a failure of the mechanism by which the blood maintains its alkalinity.

Paper, "Clinical Manifestations of Acidosis in Infants and Children," Dr. W. D. Hoskins.

Clinical manifestations of acid intoxication in infants and children are not uncommon. Recurrent or cyclic vomiting, sick headache, bilious attacks, and certain types of asthma and eczema are probably due to this cause. Among the predisposing causes are adenoids, diseased tonsils, chronic sinus or ear infections and eyestrain. The immediate cause is faulty feeding, usually overfeeding. Fat seems to be the offending element in most cases. Among other things that may precipitate an attack are starvation, constipation and the onset of infectious diseases. The attack may come on abruptly or there may be well-recognized prodromata.

The onset is usually with vomiting, which is severe, frequent and persistent. There is marked prostration and the child seems poisoned. Headache is usually present, the breath has a sweetish odor, and acetone is present in the urine. The condition is to be differentiated from simple indigestion, acute appendicitis, intestinal obstruction and meningitis. The child usually recovers in from one to five days. A well-

established attack is difficult to control. The important treatment is prophylactic. Success will depend on our skill in patiently searching out the cause or causes and our ability to correct these.

Paper, "Clinical Aspects of Acidosis in Adults," Dr. Clark Rogers.

Acidosis is a condition in which there is a production in the body of excessive amounts of acids, the most important of which are those of the acetone group. It is found in a variety of conditions, the best understood of which are diabetes, nephritis and uremia and starvation states. The diagnosis depends more on findings in the blood than on the presence of acid bodies in the urine. Treatment consists of the neutralization of acids in the body by administration of alkali by mouth, by rectum, subcutaneously and intravenously. This alkaline treatment should be continued if possible until the urine becomes alkaline and maintained at that point, as relapses are frequent and likely. The cause of the acidosis should be combated by a properly balanced diet and regulation of metabolism adapted to individual cases. Starvation, especially of carbohydrates, is a common cause. Simplified laboratory methods are being worked out to put the diagnosis within the convenient reach of the general practitioner, and it is probable that this will result in showing that these forms of intoxication are present in many unsuspected diseases and conditions.

DISCUSSION

DR. C. P. EMERSON: Much literature on the subject but a physical chemist only can speak with authority. Only condition in which acidosis can be applied is diabetes. Nasé says "Body cannot handle proteids well because it cannot split glucose; consequently acid bodies appear unoxidized." May be toxic, but only from analogy (being as others levulo rotary). Acids in urine are always neutralized. They increase because they are not burned up. The increase in ammonia is not on account of the great production, but because less is synthesized to urea; therefore increase of ammonia in the body is best indication of acidosis. Magnus Levy in two or three cases gave 3,000 grams of sodium bicarbonate. Question as to desirability of this step. Acidosis is a problem of cellular chemistry. The titratable alkalinity of the blood gives great promise in arriving at a conclusion.

DR. FRED R. CHARLTON: The effect of alkalies in cases of diabetes has been known for a long time. It may not be curative but is certainly spectacular. Six or eight years ago a physician at Johns Hopkins mentioned a number of cases of migraine cured by alkalies. He cited a case of migraine in which large doses of sodium bicarbonate internally apparently cured the man of migraine. I have seen all the symptoms of diabetes assuaged by alkalies. Matter of dosage. He cited case of suppression of urine. Three or 4 ounces in three or four days. Outlook bad. Gave Fischer's solution on two alternate days. No results. Total suppression for a week. Gave sodium bicarbonate one-half ampoule in 500 c.c. water. Urine began to be secreted in 5 and 6 ounce quantities. Some good results are to be noted.

Meeting adjourned.

Attendance, 115.

L. H. MAXWELL, Secretary.

February 22, No Meeting

Meeting of Feb. 29, 1916

Meeting called to order at 8:20 p. m. by the president, Dr. A. B. Graham. The minutes of the previous meeting were read and approved. A communication was read by the secretary from Dr. J. N. Hurty, secretary of the State Board of Health, calling attention of the coming meeting of the National Conference of Charities and Corrections. A letter was read by the secretary from the secretary of the Grant County Medical Society asking consideration of local society at time of primaries, March 7, 1916.

A communication from Mr. John B. Kitchen was read acknowledging the sympathy extended to him in his bereavement.

Dr. M. J. Shiel, Dr. John R. Stark and Dr. R. J. Anderson were elected to membership in the Society.

The application of Dr. William Reed Boggs was read for the first time.

Dr. A. W. Brayton read a memorial resolution on the death of Dr. John M. Kitchen, drafted by a committee appointed for that purpose. The chair asked Dr. A. W. Brayton to read the memorial resolution on the death of Dr. Wesley Allen. Dr. T. B. Eastman moved a committee be appointed to draw up resolutions on the death of Dr. George Kahlo. This motion was carried. The president appointed Dr. J. Rilus Eastman, Dr. O. G. Pfaff and Dr. F. B. Wynn to act as the committee.

PROGRAM

Report of the committee: "The Workmen's Compensation Law and Its Application to the Practice of Medicine." Dr. W. B. Kitchen, chairman, presented the report. Dr. W. B. Kitchen moved acceptance of report as read. Dr. Norman Jobs moved to substitute a motion for that of Dr. Kitchen's to read that copies of this report be printed and distributed among members so that a proper consideration could be given report and that it be made a special order of business at the next meeting. Seconded by Dr. J. H. Oliver. Dr. A. W. Brayton suggested some comments be made on important points. Dr. F. B. Wynn moved the amendment of Dr. Jobs' motion by adding that a printed copy be mailed to each member of the Society. Seconded by Dr. Murray Hadley. Carried. Dr. W. B. Kitchen's motion lost. Dr. Jobs' motion as amended by Dr. Wynn carried.

Dr. M. Hadley moved that Dr. W. B. Kitchen be asked to comment on salient features of the report. Carried.

The society went into committee of the whole to discuss the question regarding committee report.

Meeting adjourned.

Attendance, 100.

Meeting of March 7, 1916

The meeting was called to order by the president at 8:15 p. m. The minutes of the previous meeting were read and approved. The applications of Dr. R. B. Crabill and Dr. William L. Royster were read for the first time and ordered posted for thirty days. The society then proceeded to the special order of business for the evening. The secretary read each paragraph of the committee's report and the various sections were considered separately.

Paragraphs 1 to 7, inclusive, were adopted as read. On the motion of Dr. Ross, seconded by Dr. Gregor, Paragraphs 8 to 11, inclusive, were rejected. On

motion of Dr. T. B. Eastman, Paragraph 12 was adopted with the elimination of the word "consent."

Dr. Kitchen asked for hearing from the other members of the committee.

Dr. Hadley suggested that it was incumbent on the society to give an expression as to the stand they will take on fees. He moved a committee be appointed to consist of one general practitioner, two general surgeons, one eye man, one ear, nose and throat man, one Roentgen-ray man and one genito-urinary man.

Dr. Kitchen called attention to the fact that if the motion is carried it will serve as a club over our heads in the hands of the next legislative body. It is giving into other hands the privilege of making charges for our services. Dr. Hadley's motion was carried by a standing vote of 34 to 10.

Dr. Kitchen mentioned that very few people are exempt from law. The working of the law invites persons to leave their family doctor and accept the doctor selected by his employer.

Dr. Kitchen made the following motion:

Motion 1: That it is the judgment of the Indianapolis Medical Society and it so recommends that Section 25 of the Workmen's Compensation Law be so amended as to assure to the injured employee or his next of kin, or his legal representative if such injured employee be incapacitated for such selection by reason of his injury, the right to choose his medical or surgical attendant from among those physicians or surgeons resident in the same community as is he, provided always that such choice of physician or surgeon shall be a legally qualified practitioner of medicine and surgery and of good repute morally and professionally considered; and provided further, that should the employer of any injured employee object to such physician or surgeon, thus selected, such employer must satisfy the industrial board as to moral and professional unfitness of such professional attendant, else such attendant may continue as though no objection had been urged; and if the industrial board conclude, after objections have been urged by the employer, then and in each like instance thereafter the injured employee shall select a successor to his former professional attendant. Provided, further, that the delegate to the 1916 meeting of the Indiana Medical Association shall present this motion to the House of Delegates to the end that concurrence herewith by the Indiana Medical Association may be had.

Motion 2: That it is the judgment and recommendation of the Indianapolis Medical Society that Section 26 of the Workmen's Compensation Law be amended by "striking out" all of that part of said section following the compound phrase "for similar treatment of injured persons" namely: "of a like standard of living when such treatment is paid for by the injured person," thus leaving said amended section to read as follows:

"The pecuniary liability of the employer for medical, surgical and hospital service herein required shall be limited to such charges as prevail in the same community for similar treatment of injured persons."

Dr. Willis moved to extend a vote of thanks to the committee for their excellent work. Motion seconded and carried unanimously.

Meeting adjourned.

Attendance, 65.

L. H. MAXWELL, Secretary.

March 14, Meeting Postponed

Meeting of March 21, 1916

The meeting was called to order by the first vice president, Dr. B. Erdman, who asked Dr. W. N. Wishard to introduce Dr. Arthur R. Elliott of Chicago, who spoke on "Syphilitic Aortitis." His address was illustrated with lantern slides. Abstract of Dr. Elliott's address. A general knowledge of syphilis of the aorta and heart has been known for years, but it is only since the discovery of the spirochete that this affection has assumed any importance. Owing to the latency of aortic syphilis it has always been considered as of parasyphilitic origin, and therefore removed in interest from the parent disease and viewed with indifference.

The Wassermann reaction has materially altered our views of aortic syphilis. Get a positive Wassermann in 80 per cent. of cases of syphilitic aortitis. Citron reports 60 per cent. positive Wassermann in aortic syphilis. Collins and Sachs report thirteen cases of aortic regurgitation with positive Wassermann reactions. The spirochetes are found in the tunica of the aorta. They are found many times in the tunica in infants with congenital syphilis. Syphilitic aortitis rivals tabes dorsalis. In cities 25 per cent. of all syphilitic cases will die of syphilitic aortitis, with only 2 per cent. dying of tabes.

The statement is warranted that there is only one form of aortitis namely syphilitic. This variety terminates life in from one to two years. The early involvement around the sigmoid valves is of comparatively small importance, but on account of eventualities this lesion becomes of greater import. The diagnosis is very difficult, since there are no definite clinical symptoms or objective signs. If the condition is discovered it must be by some extra clinical methods such as the roentgen ray. In all suspicious cases the Wassermann and roentgen ray should be used.

In view of the fact that the lesions of aortitis have been discovered in 60 per cent. of the cases at necropsy, we may infer that the majority of these cases exhibit great latency. A negative blood Wassermann should not be accepted as excluding syphilitic aortitis. Progressive aortitis may exist for years with a negative Wassermann. The luetin test may furnish proofs in cases with negative Wassermann reactions. The symptoms of aortic syphilis are not constant or well defined, therefore it is wiser to make serologic and roentgen-ray studies to definitely determine the condition. The process starts with the vasa vasorum and gradually involves the three coats. In the early stages only a simple infiltration is evident. The ascending portion of the aorta is first affected. This process gradually extends until the openings of the vessels are occluded and the valve flaps covered with granulosomatous tissue. In aortic atheroma the entire aorta is increased in length and breadth. There is a thinning of the aorta in syphilitic aortitis on account of a destruction of tissue. During the early stages of syphilitic aortitis, unless accompanied by high blood pressure or aortic regurgitation, there is no enlargement of the heart. In the more advanced cases we find the enlarged or aortic heart. The extension of the process into the transverse portion of the aorta enlarges the aortic knob. Roentgen-ray examination shows an enlargement of the aorta, which gives the impression of a continuation of the aortic knob into the ventricle. Nonsyphilitic aortic heart shows a longitudinal diameter entirely out of proportion to the breadth. A mitral heart shows

greater increase in breadth. Aortic regurgitation shows a heart enlarged in all diameters.

The association of tabes and syphilitic aortitis is a constant one. The claim was formerly made that secondary manifestations did not arise until the disease was of long standing. This is not true because authorities have found that the disease may become serious in its early stages. He cited a case with aortic regurgitation which died one week after first attack. All these cases with aortic regurgitation die in a relatively short time. In the treatment of these cases there must be associated hygiene, cardiac support and antisiphilitic measures.

Dr. Erdman tendered the thanks of the society to Dr. Elliott for his kindness in coming and for his most interesting and instructive address.

Meeting adjourned.

Attendance, 100.

L. H. MAXWELL, Secretary.

THE MUNCIE ACADEMY OF MEDICINE

Regular meeting of Muncie Academy of Medicine was held in Y. M. C. A. Building, Friday evening, February 25, and was called to order at 8:15 by Vice President U. G. Poland.

Dr. Andrews reported an interesting case of parenchymatous nephritis with a compensatory blood pressure of 210 mm. A considerable lowering of the pressure was promptly followed by death.

Dr. W. A. Hollis made the address of the evening on "Differential Diagnosis of Vertigo," from which the following was gleaned:

Vertigo is a subjective sensation which a patient experiences when one or the other of the three tracts governing equilibrium is suddenly disturbed. Occasionally, when one tract is chronically impaired, by training the other two, equilibrium may be maintained as in tabes. Physiologic vertigo may affect patients in one or more of several ways: (a) dizziness when looking down from elevations or waltzing without reversing; (b) riding on train or boats and watching moving objects; (c) syringing head with hot or cold water; (d) suddenly on arising or any quick movement. Pathologic vertigo may be due: (1) organic brain disease; (2) labyrinthine (aural) disease; (3) neurosis; (4) cerebral anemia. Vertigo in the youthful subject is not so serious as in adults which often indicates disease of brain, arteries or internal ear. Vertigo from organic brain disease and arteriosclerosis is most common, being a constant symptom in multiple sclerosis. In dementia paralytica, vertigo is a common symptom in early stages; later it disappears only to return before coma or convulsions ensue. Vertigo is a frequent prodrome of cerebral hemorrhage or acute softening of brain. In most ear affections there is vertigo. Neurotic vertigo is found in those who are unduly sensitive to stimuli and impressions of all sorts. Sudden change of environment that would not affect normal persons. Giddiness on exposure to sun or bright light or overwhelming awe of a large open space such as a cathedral. Some cases supposed to be due to alcohol, tobacco and indigestion are of neurotic type. There is usually no staggering nor nystagmus in this variety, and patient never falls. Vertigo may be due to cerebral hyperemia and cardiac disease at menopause, also cerebral anemia as in chlorosis or from loss of blood.

Adjourned.

Meeting of March 10

Dr. Dunn read a paper on "The Care of a Case of Normal Labor," saying: In this plan the physician has not seen patient previously and has no assistance except that rendered by members of family. First get history of patient, health, previous labors, etc. By abdominal palpation estimate position of infant and character of pains. Vaginal examination should disclose size and shape of pelvis, condition of os, presentation and integrity of perineum. Vaginal examinations should be as few as possible. Patient is not encouraged to make traction or pull on anything. The physician should never get in a hurry when the head is bulging the perineum. It is best to deliver between pains if possible. Do not give pituitary extract if perineum is rigid. Delivery of shoulders is important for at this time perineum is often torn. If there is much hemorrhage from a laceration I usually repair immediately, if not I wait till the following day when the parts may be infiltrated with a solution of novocain and adrenalin. In sensitive patients this injection may be preceded by morphin-hyoscin. I carry no stitches through skin or mucous membrane. If muscles are properly united skin falls in place and stays there. When infant is born he is held up by the feet till mouth and throat is cleared of mucus. Cord is tied when pulsation ceases. If placenta is not expelled in a reasonable time it is delivered by Crede method. Ergot is not given as a routine measure. Uterus is watched and kept contracted by massage. Infant is first cleaned by oil or grease and later washed in soap and water. I touch the umbilical stump with U. S. P. tincture iodine and apply sterile dressing, and dressing is changed when soiled. It is not the rule to apply a binder to mother. Douches are never given. I do not attempt to deliver a woman on a bed that sags beneath the buttocks. The dining-room table is much better. I allow the mother to get up on slop jar and allow her to lie in any position that adds to her comfort. The obstetrician's outfit should contain all things necessary for efficient work, for emergencies are likely to occur miles from the source of supply. Rubber gloves should be used.

Adjourned.

Meeting of March 17

Dr. Kirklin read first of a series of papers on "Embryology," confining his remarks principally to ovulation, menstruation and fecundation, saying in part: The completely matured ovum as it is expelled from Graafian follicle is just visible to the eye as a fine white point, measuring, naked, one-fifth millimeter in diameter. The ovum finds its way to the tube, there to await fertilization by male element. It is more than probable that the corpus luteum has vital relation to the function of gestation. Bern and Frankel sought to prove that it has an internal secretion, which, circulating in the blood, stimulates and regulates changes of menstruation and gestation. Loeb has conclusively shown that the corpus luteum prepares an internal secretion, ferment or hormone, which sensitized the uterine mucosa so that it reacts to stimulation of ovum, with the production of exuberant decidua or maternal placenta. The cause of the phenomena of menstruation is still unknown. The most generally accepted theory is that an influence of some sort emanates from the ovary during ovulation, and reaching the uterus, causes a severe congestion. It is not necessary that the Graafian follicle rupture to produce menstruation. The development

and regression alone suffice. The ovum is the female unit, or element, of procreation, and, as has been learned, is prepared in the ovary for the reception of the male unit, which is the spermatozoid, derived from the testicle. The genesis of the spermatozoids is very similar to that of the ovum. The union of the spermatozoid with the ovum occurs, in all probability, in the outer end of the Fallopian tube—its pavilion. The frequency of tubal pregnancies indicates this. How does ovum reach tube from ovary? Ovary lies in a little depression, the fossa ovarica, and is covered in part by mesentery of the tube, whose fimbriae are in close proximity. The pavilion of tube opens outward in numerous projections—the fimbriae, the prolongations of the longitudinal foldings of the tube. These are covered with ciliated epithelium. The waving of cilia being toward uterus, a powerful aspiratory current is produced in peritoneal fluid of neighborhood of end of tube. Once in the tube, the peristaltic action of the wall of the latter will aid its progression toward the uterus, aided by the ciliary wave. The length of time required for passage from ovary to uterus in human is from four to eight days. It is important to know the time pregnancy begins, but, unfortunately, we are in a position as yet only to guess at exact date. All the points on which such a determination could rest are uncertain, as: (1) the date of the fruitful coitus; (2) the date the ovum left the ovary, and whether it was ripe or not; (3) how long it takes the ovum to reach the tube and uterus—all unknown factors. It is probable that most conceptions occur just after or just before time of menses, and these two periods must be considered the usual ones. No doubt menses may occur after conception has taken place.

Adjourned.

H. D. FAIR, Secretary.

ELKHART COUNTY MEDICAL ASSOCIATION

Feb. 3, 1916

Called to order at 8:10 by President Eby. Minutes January meeting read and approved. J. S. Slabaugh, Nappanee, elected to membership.

Communication and resolutions from Committee on Mental Defectives, Indiana State Board of Charities, read by secretary and adopted.

Paper, "When Is Curettage of the Endometrium Permissible?" J. A. Snapp, Goshen.

Paper, "Early Diagnosis and Treatment of Osteomyelitis," I. W. Short, Elkhart.

Discussion.

Adjourned.

C. W. HAYWOOD,
Secretary pro tem.

March 2, 1916

Regular meeting called to order at 8:15 by President Eby in Elkhart Public Library. Minutes of February meeting read and approved.

Dr. H. R. Allen of Indianapolis was introduced by the president and he in turn introduced Dr. C. R. Strickland, Indianapolis, who reported an interesting case.

A young man contracted gonorrhea one year ago last June, which seemed to clear up rather promptly within a few weeks. Jan. 6, 1916, he was taken ill with tonsillitis. Cultures from tonsils showed streptococcus viridans. At the end of forty-eight hours tonsils had apparently subsided, but a distinct heart lesion was found to have developed. Taken to Long Hospital. Temperature, 96-97.2 constantly.

Pulse, 30. Blood pressure, systolic, 90, diastolic, 70-72. Heart showed extrasystole, originating in right ventricle. Hemoglobin 90, leukocytes 8,000 to 12,800. Urine showed albumin, 0.02 per cent., and casts. No subjective symptoms. Blood culture on third day and daily thereafter was negative for several days. Then gonococcus was found and isolated from blood stream. Autogenous vaccine was made. No other medicine was given. After first administration of vaccine blood pressure was 120, pulse 54. Subsequent injections on fourth and eighth days. Notable features of case: Typical subnormal temperature, low leukocyte count and bradycardia.

"Address and Demonstration of Apparatus," Dr. H. R. Allen, Indianapolis.

Pott's disease is as old as history itself. There is evidence that Aztecs and other ancient races were afflicted with tuberculous spines. Albee and Hibbs operations. Variable results, not consistently good results from open operation. Believes plaster jacket and similarly constructed devices will invariably produce a hump. These throw weight onto diseased spine itself. Rest of the spine is the underlying principle. Dr. Allen starts to walking all cases coming with paralysis and broken back. He described and showed his apparatus in detail, the chief consideration being the fact that the weight of the upper part of the body is given to the jaw and occiput to support. Called an "outside skeleton." Takes off head and leg pieces and leaves back brace at night. It is inexcusable to have one humpback in the whole world. Charcot killed eleven patients in three days with screw jackets. Cannot do anything for old cases. Keeps early cases in apparatus for three and one-half to four years; for one year after he knows they are well.

Devices for holding margin of wounds together. Hare lip and cleft palate devices. Traction absorbers, wire and adhesive plaster in surgery have come to stay.

Treatment of burns described. Keep raw open surface cold for forty-eight hours and pain is controlled in open treatment of burns. Kind of antiseptic used is immaterial. Framework for burns shown—wire and adhesive. Has not used adhesive applied directly to burned surface. Cold merely numbs the surface, wet packs over oil cloth in burns of trunk.

We will see less and less of tendon grafting in the future. Nerve grafted to nerve—no results; nerve to muscle—fair results; muscle to muscle—it is possible to get results and enervate a paralyzed muscle. Illustrations shown. Infantile paralysis of several years' duration may be relieved and muscles enervated in this way. In infantile paralysis, operate muscle to muscle as soon as acute symptoms are past.

Bone grafting. Specially devised electric saw shown. Albee is using larger grafts than formerly. Nose work shown and discussed.

Fractures of femur and especially neck of femur and treatment illustrated. Mould of arm of gelatin with broken bones imbedded shown. Through and through pins for fractures of smaller long bones—operation done on model—external bone plating. This does many things that Lane plate cannot do and hardware is all removed after fracture is united.

Adjourned.

JAMES A. WORK, JR., Secretary.

SULLIVAN COUNTY MEDICAL SOCIETY

The Sullivan County Medical Society met in Farmersburg, March 1, at 8 p. m., with President J. T. Oliphant in the chair.

Minutes of the February meeting approved as published.

A number of communications and a copy of a bill to regulate the dispensing of medicine by physicians were read and discussed relative to such bills as might be brought up in the next session of the state legislature and the position of the various candidates for representative in this county on such matters.

Dr. A. H. Caffee of Terre Haute, presented a paper on "Eclampsia," saying in part as follows: The etiology of eclampsia is in doubt. Probably an acidosis is an important factor, affecting two organs principally, the liver and kidneys.

A woman with kidney insufficiency needs constant observation and attention while pregnant. Hepatic cases are nearly always fatal. Any sign of toxemia may be a sign of preeclampsia and should be taken care of. Symptoms often regarded as trivial are frequently very important and should be more often interpreted as warnings.

Treatment of eclampsia divides itself into the prophylactic treatment of the preeclamptic state and the treatment of the active state of eclampsia. Active treatment ranges prompt delivery of the fetus by any means whatsoever to the conservative treatment of Stroganoff.

Personally, the essayist preferred the conservative treatment, such as bleeding, chloral and sodium bicarbonate and glucose. The essayist reported eleven cases treated by the alkaline and chloral method with surprisingly uniform results. He uses sodium bicarbonate and glucose 1 per cent., each together with 50 grains of chloral to the quart used by the Murphy drop method. He does not advise or claim that the sodium bicarbonate method should be substituted for the recognized methods, but claims it to be a very important addition to the treatment now available. He sounded a warning against the forcible restraint of the patient during the convulsion, citing a fatal termination from that cause.

The paper was discussed by Drs. Maple, Scott, Thompson, Vancleave, Robards, Briggs and Oliphant.

Dr. L. A. Stewart of Sullivan, read a paper entitled, "Our Relation," which discussed the beginnings of the dental profession and the separation of the dental and medical professions. After some more or less pleasant remarks concerning the touching parting that the dental brethren had recently experienced in paying their dues he progressed to the discussion of the history of dentistry proper.

The practice of dentistry was not separated from that of medicine until the last century. As early as the fifth century B. C., there were physicians who devoted their entire time to the teeth and at this period the Egyptians ligated with gold wire, teeth made of ivory, to the remaining natural teeth. The first gold crown on record was that made for a 7-year-old boy in Germany in the year 1593, for the purpose of deception, it being claimed to have erupted naturally and to have been a miracle. In about 1746 the gold crown began to be used to prevent the further deterioration of teeth already much decayed. There was a time when the jeweler and the goldsmith practiced dentistry, especially the filling of teeth and the use of some mechanical appliances. Extracting was

largely done by the blacksmith and the barber, the last named tradesman was sometimes called the Barber Dentist and sometimes the Barber Surgeon. The first textbook on dentistry was written by Pierre Fauchard in 1799. In 1838 Chapin A. Harris, failing to get the University of Maryland to establish a dental department, established the first dental college in Baltimore in 1839. Thus the two professions were separated and dentistry entered on the age of its greatest development, growing in a century to its present important position. Horace Wells, a dentist, in 1844 gave to us the balm of anesthesia. A few years ago the American Medical Association established a section in which ethical graduate dentists were eligible to membership.

There being no further business the Society adjourned.

Visitors present: Dr. A. H. Caffee, Terre Haute.

Members present: Drs. Stratton, Briggs, O'Dell, Oliphant, Higbee, Stewart, Robards, Vancleave, Barco, Thompson, Scott, Maple.

Adjourned. J. B. MAPLE, Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1916, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies."

RADIUM BROMIDE, W. L. CUMMINGS CHEMICAL COMPANY.—It complies with the standards of N. N. R. and is sold on the basis of its radium content. W. L. Cummings Chemical Company, Lansdowne, Pa.

RADIUM CARBONATE, W. L. CUMMINGS CHEMICAL COMPANY.—It complies with the standards of N. N. R. and is sold on the basis of its radium content. W. L. Cummings Chemical Company, Lansdowne, Pa.

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RADIUM SULPHATE, W. L. CUMMINGS CHEMICAL COMPANY.—It complies with the standards of N. N. R. and is sold on the basis of its radium content. W. L. Cummings Chemical Company, Lansdowne, Pa.

BORCHERDT'S DRI-MALT SOUP EXTRACT.—A powder obtained by adding potassium carbonate 1.1 Gm. to each 100 Gm. of Borchardt's Malt Extract and evaporating. Borchardt Malt Extract Co., Chicago.

BORCHERDT'S DRI-MALT SOUP EXTRACT WITH WHEAT FLOUR.—A powder obtained by evaporating 100 Gm. Borchardt's Malt Soup Extract and 50 Gm. wheat flour made into a paste. Borchardt Malt Extract Co., Chicago.

BORCHERDT'S FINISHED MALT SOUP POWDER.—A powder obtained by evaporating 100 Gm. Borchardt's Malt Soup Extract, 50 Gm. wheat flour, made into a paste and 330 Gm. milk. Borchardt Malt Extract Co., Chicago (*Jour. A. M. A.*, March 11, 1916, p. 815).

SAUBERMANN RADIUM EMANATION ACTIVATOR.—An apparatus for the production of radio-active drinking water by the action of radium sulphate. Each apparatus is designed to furnish about 500 Cc. radio-active water per day. The exact daily capacity and efficiency are guaranteed and are stated for each apparatus. The following strength generators are offered:

SAUBERMANN RADIUM EMANATION ACTIVATOR, 5,000 MACHE UNITS.—An apparatus which imparts about 1.8 microcurie (5,000 Mache Units) to about 500 Cc. water daily.

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SAUBERMANN RADIUM EMANATION ACTIVATOR, 20,000 MACHE UNITS.—An apparatus which imparts about 7.2 microcurie (50,000 Mache Units) to about 500 Cc. water daily.

SAUBERMANN RADIUM EMANATION ACTIVATOR, 50,000 MACHE UNITS.—An apparatus which imparts about 18 microcurie (50,000 Mache Units) to about 500 Cc. water daily. Radium Limited, U. S. A., New York (*Jour. A. M. A.*, March 18, 1916, p. 893).

PROPAGANDA FOR REFORM

COLLOIDINE.—Colloidine (Boracol Chemical Co., agents) is claimed to be "A Colloidal Vegetable Iodine Combination," each tablet of which is stated to represent $\frac{1}{3}$ grain iodine. Because of the colloidal character of the iodine compound, Colloidine is claimed to be an especially efficacious iodine preparation. The Council on Pharmacy and Chemistry reports that Colloidine is ineligible for New and Non-official Remedies because, as shown by examination in the A. M. A. Chemical Laboratory, the iodine was deficient in amount and in a form of an iodid or in a form which so readily yields iodid that the therapeutic effects of Colloidine would seem to be those of iodids; and because the therapeutic claims were unwarranted (*Jour. A. M. A.*, March 11, 1916, p. 831).

EMETIC ACTION OF DRUGS.—The investigation of R. A. Hatcher and C. Eggleston show that the nauseant and emetic action of many drugs is not due to their effects on the stomach, but to a central action on the "vomiting center." Practically all alkaloids and alkaloidal drugs which have emetic properties, including morphine and preparations containing it, emetine, cephaeline, quinine, nicotine, lobeline, pilocarpine, aconite and veratrine, ergot and apomorphine, which produce nausea or vomiting as their chief or side actions, do so by direct effect on the vomiting center. Sodium salicylate, picrotoxin and digitalis also produce vomiting through central action. These investigations show the futility of the many devices which have been employed in attempts to avoid the nausea or emesis produced by many drugs as an undesired side-effect (*Jour. A. M. A.*, March 11, 1916, p. 817).

ALARMING SYMPTOMS CAUSED BY DIARSENOL.—Diarsenol is made by the Synthetic Drug Company of Toronto, Canada. It is stated to be chemically identical with salvarsan. A. H. Cook, Hot Springs, Ark., reports that he has administered fourteen intravenous injections of Diarsenol. Eleven consecutive doses were without untoward effect or phenomena differing from those attending the intravenous administration of salvarsan. The three subsequent doses produced alarming symptoms, which Dr. Cook never observed from the use of salvarsan or neosalvarsan (*Jour. A. M. A.*, March 18, 1916, p. 865).

CLINICAL REPORT ON ARSENOBENZOL.—"Arsenobenzol" is being made by the Dermatological Research Laboratories of the Philadelphia Polyclinic. It is stated to be chemically identical with salvarsan. O. S. Ormsby and J. H. Mitchell report a series of 184 injections given to seventy-five patients suffering with syphilis in its various stages. They report that the action of this drug has been uniform, its toxicity low, and its therapeutic results excellent (*Jour. A. M. A.*, March 18, 1916, p. 867).

ENDORSE THE COUNCIL ON PHARMACY AND CHEMISTRY.—The following resolution was presented at the

San Francisco meeting of the A. M. A. and signed by all the members of the House of Delegates in attendance: "Resolved, We, Members of the House of Delegates of the American Medical Association, believe that every effort must be made to do away with the evils which result from the exploitation of the sick for the sake of gain. Earnestly believing that the continued toleration of secret, semisecret, unscientific or untruthfully advertised proprietary medicines is an evil that is inimical to medical progress and to the best interest of the public, we declare ourselves in sympathy with, endorse and by our best efforts will further the work which has been and is being done by the Council on Pharmacy and Chemistry of the American Medical Association in the attempt to eliminate this evil" (*Jour. A. M. A.*, March 18, 1916, p. 910).

THE REQUIREMENTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY.—New and Nonofficial Remedies contains the rules which govern the Council on the admission of remedies to this book. These rules merely require that the composition of a remedy be non-secret, that its uniformity be safeguarded, that no false claims be made regarding its therapeutic properties and that its use shall be at least based on a probability of therapeutic merit. A simple way of determining if a certain preparation complies with the Council's rules, is to see if it is described in New and Nonofficial Remedies (*Jour. A. M. A.*, March 18, 1916, p. 913).

LARKSPUR FOR PEDICULOSIS CAPITIS.—Various formulas for tincture of larkspur for use against pediculosis capitis have been published, but larkspur is poisonous and harm may result where there are abrasions of the skin. Many prefer kerosene. It is applied under a suitable cap. After twenty-four hours the hair is combed to remove nits and then washed (*Jour. A. M. A.*, March 18, 1916, p. 913).

HEXAMETHYLENAMIN AND URIC ACID.—If further evidence were necessary to show the futility of administering formaldehyd derivatives like hexamethylenamin as uric acid solvents, it could be found in the observations recorded by Haskins under the auspices of the Committee on Therapeutic Research of the Council on Pharmacy and Chemistry. While the administration of excessive doses may produce slight solvent action, Haskins points out that the required dose of hexamethylenamin is too large and an equal or better effect can be produced more readily by administration of alkaline diuretics or sodium bicarbonate in reasonable quantities (*Jour. A. M. A.*, March 25, 1916, p. 962).

VENARSEN, VENOMER AND VENODINE.—The A. M. A. Chemical Laboratory found Venarsen, which is recommended by the manufacturers, the Intravenous Products Company, for the treatment of syphilis, tuberculosis, pellagra and other diseases, to be "a simple solution containing approximately 9 grains of sodium cacodylate, $\frac{1}{40}$ grain of mercury 'biniodide' and $\frac{3}{4}$ grain of sodium iodid to each full dose." Sodium cacodylate is inferior to salvarsan or neosalvarsan in the treatment of syphilis. The Council on Pharmacy and Chemistry held the claims made for Venarsen unwarranted and its intravenous injection uncalled for. Venomer, which is also offered as an antisiphilic remedy, appears to be a variation on Venarsen, containing considerably less sodium cacodylate and considerably more mercury and iodids. It prompts the comment that a careful physician would not give arsenic and mercury in fixed proportions. Venodine was rejected by the Council on Pharmacy and Chemistry because the claims made for it were found unwarranted and its composition unscientific. The indiscriminate use of intravenous products is objectionable for many reasons: It incurs an unnecessary danger, and it puts the physician to needless trouble and the patient to unnecessary expense (*Jour. A. M. A.*, March 25, 1916, p. 978).

BOOK REVIEWS

CANDY MEDICATION. By Bernard Fantus, M.D., Professor of Pharmacology and Therapeutics, College of Medicine, University of Illinois, Chicago. Cloth, \$1.00. St. Louis, C. V. Mosby Company, 1915.

This subject deserves to be brought more prominently before the profession. The author has filled a real need with this little work. Every physician who is called on to treat children should know of the possibilities of candy medication. In this book he can get some ideas that ought to be of much practical value to him.

SEXUAL IMPOTENCE. By Victor G. Vecki, M.D., Consulting Genito-Urinary Surgeon to the Mt. Zion Hospital, San Francisco. Fifth edition, enlarged. 12mo of 405 pages. Philadelphia and London; W. B. Saunders Company, 1915. Cloth, \$2.25 net.

The increase of general interest in all subjects relating to the sexual since the last edition of this book has necessitated a new and enlarged edition. The present volume embraces more than 400 pages. The subject is presented in a unique way. The author evidently has had a vast experience and he does not hesitate to draw his own conclusions. He is very liberal, indeed, with references to other writers and their views. The author has successfully avoided every tendency to be "narrow" in any sense of the word. His style is good and his subject matter is well presented. This edition ought to and no doubt will enjoy the popularity of the former editions of this work.

A HANDBOOK OF INFANT FEEDING. By Lawrence T. Royster, M.D., Attending Physician Bonney Home for Girls and Foundling Ward of the Norfolk Society for the Prevention of Cruelty to Children; Physician-in-Charge of King's Daughters' Visiting Nurse Clinic for Sick Babies. Illustrated. Cloth, \$1.25. St. Louis, C. V. Mosby Company, 1916.

The author admits that there is very little in this book that can not be found in most standard works. In fact there is nothing in it that can not be found in standard works, and since standard works contain so much more than does this work a volume such as this one can have no real value. Infant feeding is too important a subject to be presented in any other way than the right way. There are now enough good books on this subject to be had. Compend of no value like this one are not needed.

PROGRESSIVE MEDICINE. Volume XIX, No. 1. (March, 1916). Edited by Hobart Amory Hare, M.D., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College. Assisted by Leighton F. Appleman, M.D., Instructor in Therapeutics, Jefferson Medical College. Lea & Febiger, Publishers, Philadelphia and New York.

Almost one third of this volume is taken up by Ruhrah with his review of the infectious diseases. The subject is covered quite fully and thus brings home to the physician all the new knowledge gained in this field during the year.

All of the other subjects, namely surgery of the head and neck, surgery of the thorax, diseases of children, rhinology, laryngology and otology are presented by their respective reviewers in the usual able and thorough manner.

No general physician should miss what is contained in this volume.

THE AFTERMATH OF BATTLE, WITH THE RED CROSS IN FRANCE. By Edward D. Toland. Price, \$1.00. The MacMillan Company, New York, 1916.

In reality this is the diary of a young American who had an interesting experience in the war hospitals of France where he helped to serve the wounded Germans and Allies. In fact he did anything and everything that he was called on to do in connection with the work of collecting and caring for wounded. He tells about the wounded, the extent of their wounds, the operations performed, and the results. He commends and criticizes, as seems justified, the early lack of systematization and the efforts to bring order out of chaos in the French ambulance and hospital service, which is very interesting to all those who are preaching "preparedness."

His observations concerning the means and methods employed are instructive, and he comes to the conclusion that modern warfare is a good deal more a question of ammunition and equipment than of men.

ROADSIDE GLIMPSES OF THE GREAT WAR. By Arthur Sweetser. Cloth, \$1.00. The MacMillan Company, New York, 1916.

All stories concerning the European war are interesting, though no one can write about the terrible slaughter of human life that is occurring in Europe without touching on the tragic as well as the pathetic. In this story the author, who is an American newspaper reporter, gives his experiences in what would be considered a foolhardy trip to the fighting lines during the early months of the war. Disregarding advice as well as orders, he traveled by bicycle from Paris to the war zone. Passing through the French lines unmolested, but with many hair-raising experiences, he reached the German lines where in due time he was arrested as a spy. Later he was released, only to be taken prisoner by the French who also suspected him of being a spy. Some of the experiences encountered were amusing, others full of suffering, and peril, but through it all the author had an opportunity of observing the warfare of two contending armies and actually witnessing conditions which it has been the privilege of but few correspondents to see. To be taken prisoner three times as a spy and not be shot, were, in themselves, experiences worthy of a novelist.

A CLINICAL STUDY OF 921 OPERATIVELY AND PATHOLOGICALLY DEMONSTRATED CASES, By Frank Smithies, M.D., Gastroenterologist to Augustana Hospital, Chicago. With a Chapter on the Surgical Treatment of Gastric Cancer, by Albert J. Ochsner, M.D., Professor of Clinical Surgery in the University of Illinois. Octavo of 522 pages with 106 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, \$5.50 net; Half Morocco, \$7 net.

The records of cases forming the basis of this volume were derived from the University Hospital at Ann Arbor, the Mayo clinic and the Augustana Hospital during the author's service in those institutions. As no such work has been published for a decade or more, one expects to find much in it that is well worth careful study. To say that a careful perusal of the book more than fulfils the expectation is putting it very mildly. It is really a systematic treatise on the subject of gastric cancer, based on a foundation made of a large number of cases carefully studied.

The first chapter deals with the distribution and etiology of the disease, together with its association with extragastric diseases. A chapter on morbid anatomy is enhanced in value materially by numerous and

splendid illustrations from the Mayo clinic. In treating symptomatology the cases have been grouped under six symptom-complex heads. Emphasis is laid on the fact that the early diagnosis of gastric cancer is a microscopic one. One chapter is devoted to physical abnormalities, including gastroscopic findings. The following "seven signs of inoperability of gastric neoplasms" are given: gland enlargement above the left clavicle, Blumer's rectal shelf, involvement of the umbilicus, local or general increase in size of the liver, free peritoneal fluid, enlargement of inguinal lymph nodes, palpable lymphatic involvement about the pylorus or lesser curvature.

In speaking of the examination of the gastro-intestinal function, they say that it is not uncommon in healthy individuals to demonstrate the presence of food after six hours. The tryptophan test is not regarded as pathognomonic, and while the glycytryptophan test is not necessary for the diagnosis of cancer, it is not without value. The Wolff-Junghans test was found more constant than that for occult blood or the demonstration of gastric motor inefficiency.

The author seems to think that the information gained from Roentgen examination is less important than that gained from routine clinical examination. According to him "Roentgen-ray findings only concern what might be termed accidents in the progress of the disease process." "Until such complications occur, it is not unusual for Roentgen findings to be entirely negative."

The fluoroscope has rendered the examination by means of roentgenographic films obsolete and unnecessary. He points out the fact that the making of a larger series of plates in a desperately ill patient is a serious consideration and out of all reasonable proportion to the worth of the information returned. He says that if there are no mechanical interferences the motor-meal will have left the stomach in six hours. This is an apparent contradiction to the statement alluded to above to the effect that it is not uncommon in healthy individuals to demonstrate the presence of food in the stomach after six hours.

In a series of cases studied there were four patients in whom cancer developed following gastro-enterotomy for ulcer. There was involvement of the lymph nodes in 71 per cent. of the cases, irrespective of the early history and free fluid in the abdomen in 3.9 per cent. These are regarded as inoperable cases.

There is a short but interesting chapter on cases of gastric cancer in the young, to which a table is appended giving the clinical data in sixteen cases occurring in patients from 18 to 30 years of age.

Speaking of differential diagnosis the author says: "A sharp scalpel is often a more satisfactory differential diagnostician than is the keenest mind, medically," and further says that "the early diagnosis of gastric cancer concerns itself with the recognition of chronic calloused peptic ulcer."

The chapter on surgical treatment of cancer of the stomach is by A. J. Ochsner, and aside from the various operative procedures there is given quite precise details as to the after treatment of these cases.

The volume closes with a chapter on the nonsurgical treatment of cancer, including radiotherapy and chemotherapy.

The work is profusely and splendidly illustrated throughout and the detailed report of a large number of cases adds much to its value. All progressive surgeons will buy the book and if all internists might be persuaded to read it, the result would be a decided lowering of the death rate from gastric cancer.

Intestinal Stasis, Ptosis and Constipation

have assumed today an importance which the medical profession never before imagined. This is because the toxemia which may accompany these conditions, with its train of detrimental results, has been demonstrated, while the fact that cases may be treated successfully by the physician, is recognized.

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OF THE

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NEXT ANNUAL SESSION, FORT WAYNE, SEPT. 27, 28 AND 29, 1916.

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Octavo, 640 pages, with 91 engravings and 18 plates. Cloth, \$5.00 net.

At least ninety per cent. of tuberculous patients have to be cared for in their homes by general practitioners, not alone because of inadequate institutional accommodations, but also because most patients can thus be cared for at less expense. Therefore it is essential that the general practitioner, called upon to treat pulmonary tuberculosis, should have at hand a work which will give him the etiology of the disease, the methods of treatment best adapted to the individual case and the conditions under which that treatment must be given in order to secure the best and the desired results. Such a work Dr. Fishberg has prepared. His book is at once highly authoritative and intensely practical.

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THE INDIANA STATE MEDICAL ASSOCIATION

Next Annual Session, Fort Wayne, September 27, 28 and 29, 1916

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6th—O. J. Gronendyke, Newcastle.....	1916	13th—A. C. McDonald, Warsaw.....	1917
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ORIGINAL ARTICLES

SURGICAL DISEASES OF THE STOMACH *

MILES F. PORTER, M.D.
FORT WAYNE

To this title might well be appended an explanatory note saying: This is a sort of joy ride in that it was undertaken without due deliberation, touches only the high spots of the subject and misses most of those, ends abruptly without reaching its destination, lands most of the parties named in the hospital, and some in the cemetery, while the driver escapes with little physical harm and not sufficiently repentant to prevent him from "doing it again when he gets able."

A large proportion of so-called stomach symptoms originate in extragastric pathology. This pathology may be intra-abdominal or extra-abdominal. The extra-abdominal pathology giving rise to stomach symptoms may be found in the heart, the kidney, the brain or the cord. The chief intra-abdominal but extragastric causes for stomach symptoms are diseases of the gall-bladder, duodenum, appendix and pancreas. A large proportion of stomach cases resulting from intra-abdominal pathology are surgical rather than medical.

CARDIOSPASM

Analogous to pylorospasm and gastrospasm cardiospasm is an affection not exceedingly rare. Gottstein¹ refers to 145 cases, twenty-five of which were his own. Its pathology is not understood thoroughly. Ledderhose² reports a

case due to polyp. The affection may be so mild as to pass unnoticed or so severe as to cause serious discomfort. When the obstruction is hard to overcome the patient, after eating a little time, finds it necessary to go by himself to complete the act of deglutition by forcible contraction of the pharyngeal and esophageal muscles accompanied by deep breathing. The esophagus frequently becomes pouched, regurgitation is common, pain is not severe, while hemorrhage practically never occurs. The bougie passes through without obstruction. The condition is to be differentiated from carcinoma of the cardia or stricture of the lower end of the esophagus consequent on the swallowing of escharotics. The clinical history coupled with the use of the bougie and the roentgen-ray bismuth pictures make this differentiation comparatively easy. The condition may be relieved by the passage of bougies and sometimes permanently cured by thorough dilatation with a balloon dilator such as used by Plummer and others. Personally, I have seen but three cases of this affection. One of these cases was made very comfortable by several dilatations with the Plummer instrument. One was dilated with the bougie and then lost sight of. This was done before I knew of the balloon dilator. The third one was dilated once without marked relief. He continued to get along with his trouble without further treatment rather than take the time, spend the money and have the inconvenience necessitated by the treatment, notwithstanding the fact that he frequently has to eat two or three meals before he succeeds in getting one into the stomach. He is a farmer and works hard every day, although he has been suffering with this trouble for more than fifteen years. The affection is more common in females than males and the majority of cases occur between 30 and 40. Of my own

* Read before the Fort Wayne Medical Society, Jan. 25, 1916.

1. Gottstein: *Keen's Surgery*, Philadelphia, 1908, iii, 802.

2. Ledderhose: *Deaver and Ashhurst, Surgery of the Upper Abdomen*, 1909, i, 183.

cases, however, two were males and one a female.

Hour-glass stomach, segmented stomach, and gastric diverticula are synonymous terms used to indicate a circumscribed contraction of the stomach more or less at right angles with its long axis dividing the stomach into two or more compartments. The term diverticula is more often employed to describe a condition produced by the stomach wall being pulled on by a band of cicatricial tissue in such a way as to produce a diverticulum. The term segmented stomach is perhaps the most appropriate. The condition is always due to cicatricial tissue. According to Shomerus, among 1,014 operations for gastric lesion 7 per cent. were for hour-glass stomach. While the condition has been observed in the new born and in very young children, in all these cases thus far reported, with possibly one exception, the deformity was found to be due to preexistent disease of the stomach in infancy or intra-uterine life. I have seen one case, however, in a middle-aged female patient in which no other cause for the contraction, which was located in the prepyloric portion of the stomach, except perigastric adhesions due to cholecystitis. These adhesions did not seem to constrict the stomach. The stomach wall did not seem diseased, but the division of the adhesion together with the drainage of the gallbladder did not materially relieve the condition. I wish here to report a case which I saw in connection with the late Dr. Van Buskirk—an infant which died a few days after birth from exhaustion consequent on inability to retain any nourishment. Upon postmortem examination there was found a congenital occlusion of the duodenum due to the formation of a diaphragm about two inches below the pylorus. There was no constriction of the gut and apparently no diseased condition. However, no microscopic examination was made. This case proves the possibility of congenital segmented stomach. The constriction is usually single and located nearer the pylorus than the cardia. However, it should be borne in mind that the constriction may be within the cardia. Otherwise a large pyloric pouch accompanied or not by a dilated duodenum might lead one into doing an anastomosis between the duodenum and the pyloric pouch which would, of course, in no wise relieve the condition. The causes of this condition, mentioned in the order of their frequency, are gastric ulcer, cancer, perigastric adhesions, ingestion of corrosive liquids, syph-

ilis, and tuberculosis. The diagnosis with the aid of Roentgen-ray barium examinations is usually not difficult. The treatment is surgical and resolves itself into whatever measures seem indicated by the case in hand, whether this be in the nature of an excision or an anastomosis.

ULCERS—GASTRIC AND DUODENAL

I shall speak of gastric and duodenal ulcers together because of their relatively close relation along many lines. Duodenal ulcer is more common than gastric ulcer (of 193 cases reported by Mayo, sixty were gastric, 119 duodenal and fourteen had independent ulcers of the stomach and duodenum). Both ulcers are probably of toxemic origin. Gastric ulcer occurs particularly in young females while duodenal ulcers more often attack males of middle age. Gastric ulcers are often multiple; duodenal ulcers are usually single. Perforation is relatively rare in gastric ulcer, common in duodenal ulcers. Duodenal ulcers frequently invade the pylorus. I had one case in my practice in which there was an ulcer on either side of the pylorus communicating beneath the pyloric sphincter. It would be perhaps more nearly correct to describe this as a single ulcer presenting an opening on either side of the sphincter and communicating beneath it. Prognosis is much more grave in duodenal than in gastric ulcer. Pain immediately after taking food is common in gastric ulcer. Not infrequently there is gastric hemorrhage with vomiting. Pain in duodenal ulcer is more constant, frequently relieved by taking food. Vomiting is relatively rare in duodenal ulcer and hematemesis rarer still, while melena is quite common. Tenderness in duodenal ulcer is usually close to the right costal border, not confined to one spot, but is apt to follow the descending duodenum. Gastric stasis is frequent in gastric ulcer while in duodenal ulcer the stomach frequently empties itself more quickly than normal. Of first importance in the diagnosis of gastric and duodenal ulcer is the clinical history, second in importance the roentgen-ray findings, third the laboratory findings. If the clinical history points definitely and positively either to gastric or duodenal ulcer this diagnosis is warranted in the absence of corroborative evidence from either the Roentgen ray or clinical laboratory. It should not be forgotten that quite frequently gastric and duodenal ulcers are associated with appendicitis or cholecystitis or both. The fol-

lowing case will serve to illustrate, first, the relative importance of the clinical history and second, the not infrequent association of these lesions with chronic appendicitis:

Mr. R., aged 50, married, resident of Ohio, cattle buyer by occupation, was first seen by me in consultation with his own physician, Dr. Richardson, at his home town. There was nothing of importance in his previous history prior to the present illness other than that he had been a so-called dyspeptic for years. The present illness, which had confined him to bed for several days, was accompanied by the signs and symptoms of a tolerably frank attack of appendicitis, coupled with fainting spells and melena. When I saw him there was tenderness over the duodenum and also over the appendix, a very slight rise in temperature, pulse slightly accelerated, skin and mucous membranes rather pale. A stool which I saw was very dark, but contained no blood that could be distinguished by the unaided eye. He was advised to come to the hospital which he did and after a few days' observation and study of the case a diagnosis of appendicitis with duodenal ulcer was made, notwithstanding the fact that the stools contained no blood and the roentgen-ray findings added no evidence substantiating this opinion. On opening the abdomen there was found a chronic appendicitis with an extensive pericolic membrane together with a duodenal ulcer. A posterior gastrojejunostomy was done, the appendix was removed and the pericolic membrane divided. The recovery was uneventful. Word received from the man two months after the operation was to the effect that he had gained 17½ pounds in weight and could eat everything without distress.

I should like to emphasize the fact here that gastric or bowel hemorrhages may be of toxic origin entirely and unaccompanied by ulcer. Also that these hemorrhages may occur in connection with gastric or duodenal ulcers and may persist after the ulcer is cured. The following case illustrates these points:

Mr. F., a middle-aged married man, was taken to the hospital by his physician, Dr. Drayer, following a severe hemorrhage from the bowel. Seventeen years prior to this he had had a similar attack at which time I attended him and made a diagnosis of ulcer of the duodenum. In the interim he had had three attacks of melena. Several weeks prior to his last attack of melena he had quite a severe attack of pyelitis. When I saw him in the hospital he was extremely anemic, the urine presented the evidence of a chronic nephritis with pus and there was present tenderness at the right costal

margin, with the usual symptoms of duodenal ulcer. When the hemoglobin reached a trifle over 40 per cent. it was deemed wise to operate for fear of another hemorrhage. The site of the ulcer was plain but there were no adhesions and the usually posterior gastrojejunostomy was done without difficulty. His convalescence was rather stormy as a result of vomiting, partial suppression of urine, with a total phthalein output of 12 per cent. Improvement occurred, however, and within six months it seemed as though a complete recovery would be obtained so far as the abdominal trouble was concerned. However, nine months after this operation he developed another severe attack of melena. When I saw him some weeks after this hemorrhage I could elicit no physical or other signs of ulcer of the duodenum. The roentgen-ray bismuth picture, though not entirely satisfactory, seemed to show that the gastro-intestinal anastomosis was functioning. The urine, however, contained casts, albumin and pus, and the phthalein output was low. The patient went to the Mayo clinic where, after careful study and observation for three weeks, it was considered wise to do a pylorectomy. The gastrojejunostomy which I had made was allowed to stand as it was found to be functioning perfectly. After a slow convalescence, but a less stormy one than he had after the first operation, he returned home materially improved and seemed to be doing well, when suddenly and without warning he was seized with another hemorrhage from the bowel and fainted in the bathroom. I should have said that a short time prior to this last hemorrhage I found his blood pressure to be 250 and the urine presenting the same evidences of pyelonephritis as previously noted.

Here is a case wherein there were two factors acting to produce the hemorrhages, namely, nephritis and duodenal ulcer. There is positive evidence that both of these conditions existed at the first operation. I have no record and do not know whether I made a urinary examination in this case seventeen years ago or not and therefore can not say whether or not there existed at this time a nephritis. Possibly the nephritic condition was the chief cause of all of the hemorrhages. That it was the cause of the last one seems proved beyond a doubt. In this opinion I am supported by both Drs. Crispin and W. J. Mayo.

In conclusion, I wish to say that acute and subacute ulcers of the stomach and duodenum are strictly medical cases except there be hemorrhage or perforation. These, together with all chronic ulcers, are strictly surgical problems.

SOME POINTS IN EARLY PHYSICAL DIAGNOSIS OF PULMONARY TUBERCULOSIS *

A. C. KIMBERLIN, M.D.
INDIANAPOLIS

The purpose, when a case presents itself to a physician, is first of all to make a correct diagnosis. The supreme pleasure, the real poetry of medicine, lies in the diagnosis. By comparison there is nothing equal to it. Nothing affords one such a sense of satisfaction as the consciousness of having made a diagnosis that is apparently correct, especially if it is difficult, and particularly if it bids fair to yield good results. We all experience the same sensation and we all clamor for the same object—and that is not a selfish one, either—to be able as early as possible to locate or “spot” as we say, the disease in its incipency, and at a time when it can be controlled to the best advantage.

New things have come in medicine. Our forefathers in medicine diagnosed only, as we all know, consumption. We of the present time are asked and expected by an educated, and, one might say, a critical public to diagnose tuberculosis. It is no longer consumption. There is no credit reflected to the medical profession, there is no gain to the laity, there is nothing whatever in any one recognizing an advanced case of tuberculosis. There is, however, a great responsibility incumbent on every man engaged in the practice of medicine to diagnose what we heard yesterday morning discussed, namely, nephritis in its various forms, which is second only in frequency to tuberculosis. So that every man practicing medicine should know something about the early symptoms as well as the finer physical signs characterizing the lesions of pulmonary tuberculosis in its incipient stage. The day of the “expert,” so called, in this particular line is fast passing. In other words, a disease so common and a disease of such supreme importance makes it highly essential that every man should be capable of doing expert work in chest diagnosis. Consequently the so-called “chest expert” will soon be a thing of the past, and it is here that we see so much good being accomplished by the capable, conscientious family physician.

There are just a few things that I want to touch on and some points I hope to demonstrate. One is the power of concentration while conducting an examination.

The day of the very superficial, perfunctory, traditional custom in making a physical examination is a thing of the past. When I see a case the only interest I have is first of all to make a diagnosis; next, I must, if possible, locate the lesion accurately. Then, too, I must measure with some degree my patient's intelligence; I must win his confidence to verify my position and lend weight to what I might ask of him in cooperative treatment; I must have his absolute confidence to convince him at once that probably what I say is something nearly correct. Just as soon as I do that I have established what you heard so much about yesterday morning discussed in a very finished way, the proper psychology between the patient and myself that makes the rest of my work not only easy, but will yield the best results. And I do that, how? I do that by putting before him physical evidence of disease, in addition to what I take from his clinical history. The physical finding of disease is my own, and must be both accurate and strong enough to leave in his mind no doubt about the fact that I am probably correct. Whether he is disappointed or not, he has a subconscious satisfaction that he has at least arrived at the bottom of his trouble and probably is in position to act intelligently.

Now to properly diagnose these cases as referred to by Dr. Bird this morning, we take the presenting symptom. That is essential; do not turn away from it, although it may not do to apply, because we know very frequently the dominating symptom—if we are handling clinical tuberculosis—is one which if followed alone would lead you very far from the site of your primary pathology, though you must use it. Consequently when a patient comes to you with symptoms of clinical tuberculosis—and that is the state or stage I am talking about—and not bacteriologic tuberculosis, we should keep it in mind irrespective of an early bacteriologic tuberculosis. The symptoms we have are often anomalous and so numerous that they are very misleading, and as a result this man, while he knew nothing about his symptoms, comes to you as a subject of supposed pulmonary tuberculosis in the incipient stage. His symptoms may not be that of tuberculosis. He does not need to cough; he does not need to have lost weight or to be under weight; he may have a perfect appetite and digestion; he may or may not have slight fever. He may not have any of the symptoms that we look on as indicating early pulmonary tuberculosis; he may come purely as a neurasthenic. His nervous symptoms may dominate the whole clinical picture, and he may be a psychothemic when

* A clinical lecture presented before the Indiana State Medical Association at the Indianapolis session, September, 1915.

studied superficially. He may have a subnormal temperature; he may have great weakness; he may have a rapid heart action, great mental irritability perhaps, and we see a whole train of symptoms that would characterize the neurotic patient—not tuberculosis. Probably these symptoms are due to the toxins, the irritating influence of low-grade tuberculosis toxins, and the clinical symptoms would make you diagnose nervous rather than pulmonary disease. He may have had for a long time an enlargement of the thyroid gland. He may belong to a family where one, or two, or three members have enlarged thyroids, as we saw yesterday, three generations with history of enlarged thyroid. This man suddenly develops a tachycardia, begins to lose weight, to have sweats, and to show a general physical weakness, great nervousness and a set of symptoms that we see so frequently in the foreground of early hyperthyroidism, and the diagnostician does not live who can promptly pick this case out as one of hyperthyroidism in its early toxic stage, which always attacks first the nerve centers. The nervous symptoms of early or mild thyrotoxicosis, and those due to the irritating influence of the toxins of an incipient though active pulmonary tuberculosis in some cases, are so parallel that it staggers the best of clinicians to know just exactly how he should interpret these symptoms, or make a prompt and correct differential diagnosis.

The same thing may (I notice Dr. Bird did not seem to be able to get away from this subject this morning) come with digestive disturbance. He complains of loss of appetite, is losing weight, may be constipated, or may have a diarrhea, or a so-called "colitis" with mucus in the stools, a low chronic fever, and present all the symptoms which go with a chronic gastrointestinal disturbance. When you begin to analyze you cannot match the symptoms to suit the case, and are finally driven back further and further. It may be a little temperature, a rapid heart action, and you get deeper and deeper into the mire. His digestive disturbances do not hitch up to anything else in proof; his appetite is capricious, a slight morning nausea, and the patient too young for the more common disease of the upper abdominal region, and you begin to realize that he is not a subject of organic disease below the diaphragm, but still you have not made a positive diagnosis, and are rather amazed when a year or two rolls around and someone says to you, "Do you remember So-and-So? Well, he has pulmonary tuberculosis." Then you wonder where you blundered.

This occasionally happens to all of us, it matters not how much experience one has had.

The next one is a case of intestinal stasis—your neurasthenic with intestinal stasis, which just now is having a little rest in medical journals. For a time we were seriously studying this subject until crowded out by the surgeon. But we medical men did not do our duty or produce rapid results, so our surgical friends rushed in "where angels fear to tread" and tried to reclaim to health these poor biologic defects, forgetting that this disease or condition from which they were suffering dated back 200 years before that individual was born. In intestinal stasis you can interpret the symptoms quite as you like, but it always is liable to masquerade under a symptomatology that would defy the elect in the matter of differential diagnosis, and though intestinal stasis is frequently associated with early pulmonary tuberculosis, the metabolic trouble may be and often is common to both diseases.

Again, and this is what I have seen personally—and I have made some mistakes along this line as well as the rest of you. I refer to chronic malaria. It quite amuses me to hear a physician tell you how to diagnose absolutely, or rule out, malaria. We know it ought to be diagnosed, but to do it is another thing. We may go over every point—the chronicity of it, the fever so variable, the anemia so common, the influence on the nervous system of your patient, the whole vasomotor disturbance which goes with it, the irritable heart; then we lean on the microscope, which to the uninitiated in practical medicine never fails. Chronic malaria may pass you repeatedly with all his regalia and you never mark him, simply because you do not happen to tap that finger when he is on dress parade. That only comes occasionally. Three-fourths the time, yes, more than that, the malaria organism is nestled away somewhere in the blood capillaries, ready to make a raid at the proper time, to suit his own convenience, and if then you catch him when out surely the diagnosis between that and early tuberculosis is very simple. But just keep in mind that during the majority of the time he is hidden away some place in the body and like the well-trained soldier—out of the way but always ready for action.

FAMILY HISTORY

Lampson says that 67 per cent. of all cases of pulmonary tuberculosis have a history of open tuberculosis somewhere in the immediate family. Reitz says that 40 per cent. of all his cases showed open tuberculosis in the imme-

diate family, while in 73 per cent. there was a history of tuberculosis somewhere in the collateral branches of the patient's family. A. Medin of Copenhagen says to include pulmonary tuberculosis, spinal disease, hip-joint disease, and so-called scrofula, and you will find a positive history in 92 per cent. of all cases. Never take a patient's word as to a negative family history of tuberculosis. If it is positive, all right; if it is negative, it is not worth anything. I am speaking of the average private patient.

This brings us to our subject proper, and that is the physical examination. I fear your chairman, Dr. Gronendyke, made a great mistake when he told me to take all the time I wanted. The physical examination is worth just about what one's services are, and that is according to what you are willing to make it. You can make a physical examination of inestimable value, and you can make it of no value whatever. The first thing which any one attempting to diagnose tuberculosis of the lung in its early stage should know, is the anatomy of the chest. The next thing, he should carry a very clear pathologic picture in his mind of the manner in which pulmonary tuberculosis spreads. I used to reproach myself for this because I thought it led me wrong, but one time I heard a sermon by a very noted bishop who said he never made a good prayer until he got fully in his mind and kept there, a Biblical picture that hung on a wall of his father's house. He said while praying he could always see that picture, which inspired him and brought to him a feeling of concentration and earnestness that he never got otherwise, and it had served him his lifetime—he was then an old man.

You will bear in mind that tuberculosis, according to Hawes, bacteriologically speaking, occurs in more than 75 per cent. of all schoolchildren in Boston under 15 years of age. And, too, according to other equally as good authorities, the site of entry of the tubercular bacilli takes place in the bronchial mucous membrane in about 96 per cent. of all cases; that is, it begins in the lungs in about 96 per cent. I think from all Dr. Rosenow said last night we do not need to charge anything more against the tonsil—it has enough. But they are rarely if ever the portal of entry of the tubercular germ. Tuberculosis belongs to the lung. But first in childhood, as a rule, the bronchial and tracheal glands are involved, and when the disease has reached the so-called clinical stage we have involvement of the pulmonary alveolar tissue, reinfection occurring from the root of the lung, the process

extending along the course of the bronchial tubes as well as the paravascular lymph space toward the lung surface.

THE ROENTGENOLOGIST

If you visit Dr. Cole's laboratory for the study of a stereoscopic chest plate you will note that while he studies the root of the lung and follows the ramification of the bronchial tree, he will invariably point with delight, and sometimes with apparent relief, to the mist or very slight cloudiness of the pulmonary tissue proper, and attaches the greater diagnostic importance to this. By carrying such a picture as this in one's mind, one is able in a measure to not only interpret the progress of disease, but to understand the slight physical alterations in the sounds, however elicited, by percussion, or auscultation of the breath, and whispered voice sound.

Too, if one is to be able to do good work in the diagnosis of the diseases of the lungs he must first know something of the acoustics of a normal chest, as well as the pathology of early pulmonary tuberculosis.

The chest, grossly, is divided into two equal parts, the upper including the apices of the lungs and the lower the base of the lungs. In percussing the lower part, the stroke may be varied to suit the occasion; at least it can be forceful without modifying the percussion note. The same thing in a measure is true of auscultation. Respiration can and in most instances should be rather forced when examining the lower part of the lungs. Also, posteriorly, in auscultating the voice one may have the patient speak aloud, though the whispered voice is the only reliable one. In percussing the upper chest quite firm pressure should be used; the pleximeter finger when possible should be snugly lodged in the interspaces, or crowded well under the body of the pectoral muscle or high in the axillary region and interscapular spaces. The pressure used should be quite firm, but the percussion stroke must not be too heavy, and if auscultating the patient's voice in the upper chest only the whispered voice should be used. As a rule, the breathing must not be too deep or hurried, though occasionally it is well to have a patient first cough and then take a very deep breath to best bring out the sound of the upper lobe of the lungs.

The reason for dividing the chest into two parts is the number and size of the bronchial tubes which are greater in the upper lung and the bony chest wall more firm, as both sounds (breath and voice) have their origin in the larynx, their waves being transmitted down the

bronchial tree presumably equally in all directions. If the quality of the voice, the size and state of the bronchial tubes, as well as the density of the lung and thickness of the chest wall were exactly the same in each patient, physical examination and findings would become merely a matter of routine; but they are not, hence the art in physical diagnosis is to detect the slight alteration in the acoustics of the lung by eliminating or at least minimizing the influence of these varying extraneous conditions.

You will note (pointing to the chart) that this upper area is marked so as to resemble a normal pulmonary tissue or alveoli, while the next area is more or less rarified or emphysematous, while the one below represents a slight tuberculous thickening or infiltration, making it more dense than the normal lung tissue or alveoli. Note, too, that the bronchial tubes ramify these various areas without apparent alteration in their size, thus carrying the sound wave uninterruptedly, only to be modified or not by the density of the pulmonary tissue found near the periphery or surface of the lung, and when this part, the alveoli, is altered in density then the physical signs are changed and it is possible to recognize such alterations of density in the pulmonary tissue proper.

Just a word in regard to percussion. One is not competent to do good work in detecting the finer signs as evidence of disease until he has thoroughly mastered the art of percussion, which means he should so perfect himself in the art of percussion as to be able to practice it without giving any attention to the manner in which he is doing it. Firm pressure with the pleximeter finger, a good stroke made at right angles, using the weight of the hand when necessary, or stroke lightly in children or in marking out the thin ledge of the lung, are mere matters of detail that one acquires only by practice. In auscultating the breath sounds one should constantly keep in mind that the first and earliest alteration is diminished volume, and all other auscultatory findings are directly dependent on this alteration in volume. It is the pitch of the inspiratory note, the prolonged expiration, plus the volume, which we group together and call quality. Occasionally, though it is not the rule, in early tuberculosis we find evidence of a complicated bronchitis which gives one crackling sounds of varying quality denominated as *râles*, the finding of which is not constant enough to be of much value, though when present they are extremely significant when taken together with other physical findings.

To be sure, percussion and auscultation of the breath sounds are our chief and most reliable means of recognizing incipient pulmonary tuberculosis, but auscultation of the voice is of much greater value than ordinarily appreciated, especially if properly practiced and studied. First, the spoken voice is very unreliable; in children it is seldom practical, and in adults it is too strong and the amplitude or force of the wave immediately throws the whole of the chest wall into a state of vibration. This you will understand is a sympathetic sound, or rather one that is coming to the examiner's ear directly through the medium of the chest wall only, while the finer sounds, the ones that we really should study, are the sounds following through the bronchial tree and are entirely overshadowed by the coarse and more forceful waves reaching the ear directly from the walls of the chest; hence in all the upper portion of the chest only the whispered voice should be used, and when practiced requires the closest attention on the part of the examiner.

The patient should be instructed to speak the words, "one, two," clear, distinct and not hurriedly. There is no advantage whatever in adding the word "three." The "one" is of little value, it being merely a "get-ready" so to speak, but the "two" will furnish all the findings needed to complete or make valuable this method of study. Also it is the very beginning of the word "two" that gives one the most reliable evidence of altered density in the pulmonary tissue through which the voice sounds travel.

When one experiences great difficulty in getting a patient to breathe properly during an examination, fear and anxiety on the part of the patient is frequently the sole cause, and many times the fault is with the examiner himself, when he makes too great or conspicuous an effort in instructing a patient as to just how he should breathe, or tries by too great an effort to persuade him that he should breathe just so-and-so. Most patients will breathe quite properly throughout an examination as long as they are breathing unconsciously, but as soon as the examiner makes the patient conscious of the details of what he is trying to do, he is apt to breathe in almost any way but the one you wish, or the normal way. He is quite like the neurasthenic who asks you for a diet list. Just as sure as you comply with his request by giving a written list of articles of food, he will do nothing else but call you daily over the phone for further instructions or to make complaint of its disagreeing with him, all of which is the

result of the physician directing the patient's anxious attention to his digestion and diet.

It is supremely essential that a patient undergoing an examination for early pulmonary tuberculosis in one's private office, should be at ease both mentally and physically, especially the latter. This raises the question of the best position of the patient during examination. This is very important, and when not followed is often of itself sufficient to make a fine diagnosis impossible. The fundamental thing is to get the whole muscular system relaxed, and especially the area of the chest which is directly under examination, as the modification of the various breath and percussion sounds are not all due to the altered density of the interthoracic viscera, that is, the lungs. An excess of subcutaneous fat is always an interference to doing fine work, though a bony chest, utterly devoid of subcutaneous fat and frequently with slight muscular development, makes percussion not only worthless but very misleading. One can percuss with all skill and care imaginable over a fairly solid tubercular area, or over a completely consolidated pneumonic area in a thin bony chest in an old man with an emphysematous lung whose ribs cross the chest almost at right angles and in addition are firm and unyielding because of the calcification of the costal cartilage and the findings will be worthless. Clinical tuberculosis in its incipency is most frequent in adults, hence the necessity of taking advantage of a position which gets the muscles as nearly as possible out of the way, which means at rest or relaxed.

To percuss the anterior chest the patient should be standing or seated on a chair high enough to bring him on a level with the examiner, and if not securely poised or supported will, when you attempt to percuss and make the proper pressure with the pleximeter finger, unconsciously offer enough resistance with his whole muscular system to maintain his equilibrium, thus often dulling the percussion note. When percussing the supraclavicular region or apices the arms should be dropped by the side and kept perfectly straight, the head should not be held in position but perfectly balanced on the shoulders. The percussion stroke should be directly at a right angle, changing its direction to suit the curves of the neck. None of the muscles, especially their free margin, should be seen or felt at any time. This is not only true when examining the supraclavicular region, but also when examining the axillary, subpectoral and interscapular regions. The latter being the most difficult to relax, the

resistance offered by the heavy muscles in this region being very marked.

When percussing or auscultating the upper interscapular region the patient should be seated on a firm table or chair, just high enough that his feet cannot reach the floor. Ask him to let his shoulders drop, put his arms forward, not folded, as is too frequently done, to incline his head and shoulders forward allowing the spine to bend over of its own weight. It is easy to tell by the sense of touch when the patient is pulling them over. Change his position so that the whole of it is done by gravity alone. In this manner there is practically no suprascapular region left for examination. The supraclavicular region extending back to the interscapular area is near enough for all practical purposes.

In examining the axillary and subpectoral regions it is best that the patient be lying down on a firm table, not a couch or bed which has springs anywhere about it, as that may frequently modify the notes elicited by the percussion stroke. The shoulders should take a normal position, the arms partially flexed at the elbow, the hands perfectly relaxed. This gives the greatest room for the examiner in the axillary area, as it is here (pointing to the chart) that the bronchial tubes more nearly approach the surface, or rather are lost in a mass of soft pulmonary tissue, and alterations in sounds when found here are usually free from the modifications so frequently present near the mediastinal area. Percuss high in the axilla, not using too much force in the stroke.

The area we should give the most attention to in our examination is first the apices or supraclavicular region. In this percussion is the most reliable. Beginning at the neck where it is distinctly flat, with light though a firm, short stroke, one works toward the point of the shoulder, keeping in mind that the transformation of sound from flatness to resonance should be an abrupt one. In percussing, if the note edges off from flatness to fullness and then resonance, there is something wrong, though taken alone it would not warrant a diagnosis, nor does it mean the diseased process is located in the apex. It may be at the back of the lung or even at the base, but bear in mind distinctly that there is something wrong, and if supported by other suspicious evidence, warrants a diagnosis.

In percussion as well as auscultation of the interscapular region carry with you clearly a mental picture of the anatomy of the lung, remembering that the interlobar fissure begins at about the level of the third dorsal spine,

passing obliquely forward to the level of the fifth rib in front. If during percussion or auscultation of either the breath or whispered voice sound one can recognize even a slight change in the region of this fissure, it is unmistakable evidence that there is some alteration in the density of either the base or the whole of the upper lobe, or the apex of the lower lobe. I have found this of inestimable value and have been able frequently to demonstrate it to students, who would look in amazement when shown its presence and the ease with which it would be demonstrated.

Next, the upper substernal area. The two lungs are in close apposition in the midline down to a level of the fourth costal cartilage. The lung tissue here is very thin and more movable in light respiration and beginning forced respiration than the main body of the lung. It is here we find most frequently emphysematous blebs. It is here, too, where we very frequently get our first unmistakable evidence of impaired elasticity or density of the pulmonary tissue. When studying this area the bell of the stethoscope should be alternated along the midline from one side to another, keeping on the midline and not getting too far to either side. The pressure should be rather firm, the breath should be shallow but distinct. The examiner should listen for an alteration in volume, especially at the very beginning of inspiration. If the breathing is too heavy the deeper bronchial sounds are transmitted through the thin layer of pulmonary tissue giving it a distinct bronchial intonation. This can only be avoided by light breathing. The same is true when auscultating the voice, even the whisper should be soft and short, but distinct, and in percussion the finger should be placed firmly in the interspaces; the stroke should be done with one finger, though carrying the full weight of the hand, and the blow should be delivered directly over the joint of the terminal phalanges of the pleximeter finger. Careful comparison should be made on either side as close to the border of the sternum as possible, but do not deliver the stroke directly over the sternum (demonstrates).

By exploring these different areas in the manner which I have attempted to describe it is most gratifying to see what can be accomplished in the matter of diagnosis of early pulmonary tuberculosis. These will furnish evidence of modifications in the physical findings which are quite as delicate and quite as reliable as those to which we at times attach too much importance—the findings of the roentgenologist. I do not mean in any way to detract from the

work or importance of skiagraphy in the diagnosis of early pulmonary tuberculosis. The truth is, I think we owe an everlasting debt to the roentgenologist, not only for what he can or has done in helping us to make or confirm a suspicious finding, but, too, for the supreme reason that he has been our "pacemaker" in the matter of teaching the possibilities of a properly made and refined physical diagnosis, though when a physical examiner applies himself, keeping his mind fully concentrated on what he is doing, cutting out all traditional customs of a routine physical examination, he is quite able, with the advantage of a personal and family history and a thorough clinical history, to arrive at conclusions which are of more practical value to the medical man than would be the findings of the roentgenologist, who only studies, as it were, a picture showing only change in density. This brings to my mind the story of a man who bought what was supposed to be a very fine rabbit dog. He went out with the dog and started a rabbit; the dog and the rabbit disappeared and the man followed. After a while he came across an Irishman and asked him if he had seen a dog and a rabbit. "I did." "And how were they making it?" "Well," said the Irishman, "Oi think the dog was a little ahead." I hope this will be soon, if not now, the position of the physical examiner and the roentgenologist.

We should not overlook during a physical examination of the chest for latent or incipient pulmonary tuberculosis, the signs of disease frequently evidenced by the circulatory system. The presence of enlarged superficial veins over the anterior chest wall may not mean pulmonary tuberculosis, but are so frequently associated with pulmonary or pleuritic disease that when present they should arouse one's suspicions. I might add they are more frequently seen on the right side than the left. Too, the presence of a heart murmur, especially if systolic and synchronous with inspiration most frequently heard at the base of the heart, though sometimes in the lower posterior chest, are frequent findings of interthoracic mischief of a tuberculous nature. In auscultating in the right axillary region when in doubt as to the presence of pulmonary thickening, and in the absence of known cardiorenal disease, if both heart sounds are heard distinctly it is always suspicious of a pulmonary or pleuropulmonary tuberculosis.

The location, distinctness and fixedness of the apical impact is not infrequently of great help in confirming what would otherwise be a difficult or impossible diagnosis. Often the

heart is much easier to outline, its border, especially the right one, is sharp and distinct from being exposed, as it were. The pulse rate if constantly rapid in the absence of a renal, arterial, neurasthenic or toxic cause, should always be looked on with misgivings. To be sure, the value of these circulatory findings presupposes a thorough knowledge of the patient's personal and clinical history.

Aside from the pleasure of making an intelligent and conclusive physical examination, is, or should be, its reliability. Remember, one objective sign should in diagnosing be worth a dozen subjective symptoms. What the patient tells one may be wrong or misleading, but what one finds himself from a physical examination you alone are authority, both for its presence and its interpretation as well as its application, and it is for this reason, and not to tell you anything new, that I make this effort, with the hope of bringing a few simple thoughts and simple physical principles into practical use, hoping they can possibly be of some help to the everyday family practitioner in making a diagnosis of early pulmonary tuberculosis more constant, more easy and more reliable, that he may be a more efficient member of this active army of medical men who are working to eliminate this greatest of social scourges.

DISCUSSION

DR. ALFRED HENRY, Indianapolis: Dr. Kimberlin is familiar with the Twenty-third Psalm, and part of it reads, "My cup runneth over." But the question is, Are you going to do what Dr. Kimberlin has shown you how to do? If you are going to do some of these things, his talk has done a great deal of good; if you are going to keep on as some do (although they are not in attendance at this session) without looking over the patient or feeling his pulse, and telling him "You have no lung trouble," then his talk will not have much effect. If the doctors all over the state could realize that 4,500 tubercular patients answer the roll call every year, they would tear off their coats and try to make diagnoses of incipient tuberculosis, and then a large percentage of that 4,500 would not hear the roll call each year. Tuberculosis must begin, and it begins and continues until death or until it is diagnosed—and then it continues in most cases. If a case begins in January, as a rule it is not discovered until July, and July is three months too late. You know that pulmonary tuberculosis is diagnosed sometimes in the first, often in the second, and many times in the third year, and you also know what the

end is when you diagnose it in the second or third year.

Early diagnosis of pulmonary tuberculosis entails great responsibility on the family physician. Allow me to say this—you had better say to your patient "You have tuberculosis" if you are in doubt about it, than to say "You have not tuberculosis." You give the patient no chance to protect himself. - He believes you and goes away and says, "Dr. So-and-So told me I did not have tuberculosis." If you err it had better be on the other side. If he has tuberculosis he will do something to cure himself, and if he has not, what has he lost by sleeping with his windows open or outdoors for a year? He is better, and it does not make much difference whether he had lung trouble or not so far as that diagnosis is concerned.

Some things we should remember as landmarks, and if I should call your attention to anything outside of what Dr. Kimberlin has mentioned, it would be "How do you feel?" Incipient tuberculosis carries with it a characteristic feeling that nobody can describe but the man who has it—and he cannot. That feeling is persistent; they all feel tired; they have a feeling of malaise; they do not want to get up when once they sit down; they do not want to stir around. They all have days and weeks of that. If it persists for weeks, or for two or three months, then be very suspicious. I always ask a patient, "How do you feel?" and give him time to answer. It may take him a minute, or ten minutes, but that characteristic feeling that goes with incipient tuberculosis—or any stage—must be given attention, and it will help you in your diagnosis.

Dr. Kimberlin mentioned family history. I was asked the other day to find some cases of incipient tuberculosis to be presented here next week at the biggest meeting of the kind ever held—the Mississippi Valley Conference on Tuberculosis. I was asked to find three cases for clinicians to present next Thursday. I look after the free tuberculosis clinic in the city, and we have perhaps 150 cases under our notice at present. I ran over these records to find three cases of incipient pulmonary tuberculosis, and it was a hard job. I turned to the little fresh-air school on the Tech. grounds to find some children I had diagnosed as incipient pulmonary tuberculosis. They did not, of course, have all of the symptoms and signs of the early disease; they did not have positive sputum. Every doctor in the state of Indiana sends specimens of sputum to some laboratory for examination, and in too many cases he sends it there for diagnosis; but negative sputum will not diag-

nose tuberculosis; negative sputum will not tell you that your patient has tuberculosis. A little girl of these three had the feeling such as I mentioned a moment ago. Her father has consumption. She has lived with her father, she has slept in the bed with her father for six months. She is pale, but has not a rôle in her chest, she has not positive sputum, although she has been examined twelve times. I say she has incipient tuberculosis. She had a very slight rise of temperature for about eight afternoons.

I believe you had better be on the right side in diagnosing early tuberculosis in children. If a parent has it, that child is a candidate and you cannot get around it. If 90 per cent. of people have tuberculosis, why has not that child? The Vienna clinics prove that point. All three of these children have a family history of tuberculosis, and I believe they have tuberculosis. You can only prove this by positive sputum, that is the only way, except by combining all the symptoms together, and by your own common sense and reason. Your Roentgen ray will nearly prove it. It shows you a cloudy condition that looks like tuberculosis, but a Roentgen-ray plate is not worth very much. Get your stereopticon plates with an expert reader. The expert reader with the stereopticon plates is doing more for the diagnosis of incipient tuberculosis than any other one thing.

I am just as hungry as you are, but I want to say this—that we ought to pay more attention to some of the simpler things. Take the rise in temperature. How many times do you take temperature—one or a dozen? Take it a dozen times, a large number of times. Examine your sputum a dozen times, and do not make any conclusions on one temperature or one sputum examination. Do not say that because there is no family history that you probably do not have tuberculosis. Be very suspicious of how that child, or man or woman feels. I doubt if one in ten of you could bring an incipient tuberculosis case to clinic. Incipient tuberculosis cases do not have positive sputum.

You can all do the things that Dr. Kimberlin mentioned; you can be careful, and your ear is just as good as Dr. Kimberlin's—not so well trained, but the anatomy is just as good and you can train it, and train it on your own patients. Spend a half hour to an hour on each patient instead of a half minute to a minute, and then you can learn to diagnose these cases.

DR. W. T. S. DODDS, Indianapolis: I am very proud and take great pleasure in recognizing that we have a man who can give us as detailed discussion of tuberculosis as Dr. Kimberlin. I

am also very proud to say that we have in this city one of the best free clinics, and I am glad to give honor to the layman who insisted upon starting that clinic—ex-Mayor Bookwalter.

The differential diagnosis of tuberculosis, as Osler says, is between two things—a man's ability to find things, and the patient's ability to show them. Family history in tuberculosis is of the greatest advantage in diagnosing the incipient stage. The baby's grandmother and grandfather are usually the cause of our incipient cases in children, because they have nothing else to do but hug and kiss the baby. I know of no greater cause of tuberculosis than either a mother dying of it while she is nursing her baby, or the association of the child in its first year with open tubercle bacilli—an everyday scene. Tubercle bacilli in the sputum means consumption, not tuberculosis—open lesion. I would rather have fifty negatives than one positive. Temperature in tuberculosis is important, but it may mean nothing. While temperature is part of the symptom complex, it is the constant afternoon temperature that counts. Our lamented friend, Dr. Potter, insisted before this society for years that the afternoon temperature was one of the most important things we had in the differentiation of incipient tuberculosis. Peace to his memory! He taught this society and this state more about the differential diagnosis of incipient tuberculosis than any other man.

Dielfouy brought out, as has Dr. Kimberlin, the muscular results of pitch and tone. Pitch and tone depend on what we recognize in pitch and tone. Next week we will have in this city one of the greatest meetings ever held in the United States on the question of tuberculosis. You will hear Dr. Kennon Dunham discuss this question in connection with his talk on "The X-Ray and Tuberculosis." Too much fat on the chest is the same as a mute on the piano wire. If you want a clear tone you must get away from fat.

I was glad to hear Dr. Kimberlin give you such a clear idea of what the position of the patient should be. One of the most important things is to get your patient relaxed, both mentally and muscularly, because if he is tense mentally, if he is afraid, up goes the heart and you get râles and sounds that are not normal to him and may confuse you.

The important thing is first to get your clinical history, get acquainted with your patient, have his family physician along and let him help the man who is going to make the diagnosis, get the patient relaxed and make him

feel at home. Then you can do good work. Otherwise your findings will not be satisfactory to you, nor to the consultant, and decidedly unsatisfactory to the patient.

DR. CHARLES R. BIRD, Greensburg: I want to express my deep appreciation of the forceful way in which Dr. Kimberlin has outlined the physical diagnosis of tuberculosis. He certainly has made a fine plea for good diagnostic routine.

DR. A. W. BRAYTON, Indianapolis: It was more than forceful, it was scientific poetry. He started out by saying it was poetry, and that high plane was carried throughout.

We have had some great doings here in the last two or three days—the great ones have been here, and they found a fine group—not the city which I have seen grow in thirty-seven years from 70,000 to 250,000—but it is the men they found here. Take the group on nervous diseases yesterday, led by the paper by Dr. Max Bahr and followed by Dr. Albert Sterne and others. It was a fair representation of the great growth that has taken place in medical practice and in medical diagnosis in this city in the last eight or ten or fifteen years. We have kept up with the procession. We have a society that we may well feel proud of, and I always like to register myself with the Department of Medicine. I read a great address of Dr. Lewellys F. Barker on our medical colleges, the medical profession, and what the medical student should be, what we as teachers should make of him. It is a wonderful address, and we are coming to that high ideal. The students going out of our school now show the effects of what Dr. Kimberlin and I and other good men did not get and had to make up in other ways. Now they have four years in preparation, then four years in college, and then a year as intern in a hospital.

I am surprised that the Association JOURNAL in mentioning hospitals forgot the one where the nestors of our profession did such great service, where Dr. Wishard reigned four years, Dr. Oliver four years, and others for varying lengths of time. That is where the training schools of this city started, and it is the great place for teaching at the present time, as is that college over there—that college worth \$75,000 that twenty-five or thirty of us gave free to establish a school of medicine that should be under the state name, that should be permanent, and that should have for its object the highest standards of instruction. Give them something to hang a diploma on. We are doing something ourselves. It is a fine thing to have the great ones come from the outside

and find us; it is a much finer thing to find ourselves. I am always glad to come to the medical section, which is really the great section, and listen to the fine work that is being done by the fine men of Indiana.

Forgive these wandering cries. They express what I feel and believe and know and have proved by a long experience. We must hang together. If we do not we will hang separately.

DR. A. C. KIMBERLIN (closing): I am sure I should not intrude on you any longer, except to say this: If it has been possible by this little demonstration and by what I have said to help some one make a better diagnosis, I am well satisfied. Next to the pleasure of making an accurate diagnosis is to be appreciated, or at least to have your ethics appreciated, by your fellow workers.

THORACOPLASTY FOR CHRONIC EMPYEMA *

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The human thorax differs from that of the animals usually employed for experimental purposes in having a more or less rigid mediastinum, which separates the lungs and enables one of the latter to act when the other is thrown entirely out of function. This arrangement enables the human subject to survive injuries or infections of the chest which are quickly fatal to the lower animals. Thus a perforating wound permitting the entrance of air into the pleural cavity practically always kills the dog, while the same injury unless complicated by a severe hemorrhage is seldom fatal to man. Likewise an empyema rapidly throws both lungs of the dog out of action, while in man it commonly destroys the function of but one. For these reasons many problems having to do with the pathology and surgery of the human thorax cannot successfully be solved by experiments on the lower animals. This is especially true of the condition named in the title.

The interior of the lungs is in communication with the atmosphere and is under atmospheric pressure. That part of the thorax not occupied by the lungs is under a negative pressure of varying amount, but averaging 5 to 6 milli-

* Read before the Indiana State Medical Association at the Indianapolis session, September, 1915.

* It was intended to include in this article the treatment of chronic tuberculous cavities of the lung by thoracoplasty, and to give a report of the results obtained thereby in six cases. But, because of a lack of complete clinical data it was decided to defer a report of this work.

meters of mercury during inspiration.* It can readily be shown that the maintenance of a negative pressure, at least during inspiration, is essential to life for, when this is not possible, death from suffocation results.

The function of the intact lung is protected not only by the rigidity of the mediastinum, but by the remarkable power of the pleura to form fibrous tissue. In any infection of long standing of this membrane, it is replaced by a dense layer of connective tissue which may be $1\frac{1}{2}$ inches in thickness, and which gradually acquires a bony hardness. A cavity so enclosed is, for all practical purposes, extrathoracic. It may be operated on without fear of disturbing the pressure conditions in the remainder of the chest. For these reasons the use of any special device for securing artificial respiration is unnecessary in this class of cases. Apart from the fact that these patients have a diminished lung area, they are no more liable to respiratory failure than patients with intact chests. Of course, the patient must be so placed on the table that his breathing suffers no embarrassment from his position. This can be tested before administering the anesthetic.

The limits of this paper forbid a discussion of all the operations devised to cure a chronic empyema. Briefly stated, these operations have aimed to accomplish one or both of two objects: (1) to bring the thoracic wall to the collapsed lung (Estlander, Schede), or (2) to bring about the expansion of the collapsed lung (Fowler, Ransohoff, Delorme).

The first point to determine in any patient having a chronic empyema, which has been thoroughly drained, is whether the lung is capable of expansion if freed from its imprisoning coat of scar tissue. To discover this I rely on the following observations: 1. The amount of uncollapsed lung, as determined by stereoscopic Roentgen-ray plates. 2. The size of the cavity. 3. The presence of curvature of the spine and overlapping of the ribs. 4. The level of the diaphragm. If there is no uncollapsed lung, if the cavity is small, the diaphragm in a high position, the spine curved with its concavity

toward the affected side, and if the ribs overlap one another or are close together, then I assume that any effort to bring about expansion of the lung is hopeless.

Lilienthal¹ has recently advised the thorough visual exploration of the empyema cavity by spreading apart two adjacent ribs. There is no doubt that by this means excellent exposure of the pleural cavity can be obtained. But with stereoscopic radiographs, is such inspection always necessary? I doubt it. Radiographers can now diagnose encapsulated empyemas, lung abscesses and subdiaphragmatic abscesses with such facility that direct visual inspection is not necessary in many cases. Furthermore, when the pleura is greatly thickened, spreading of the ribs is difficult if not impossible. Lilienthal advocates also the stripping off of the plastic exudate from the surface of the lung, before this has by its contraction done irreparable damage. In my own experience simple drainage of an ordinary postpneumonic empyema, even when the same is of several weeks' standing, has always effected a cure with comparatively rapid closure of the sinus and with little or no deformity of the chest. The cases in which the sinuses persist are those in which—usually as the result of unwise surgical interference—a streptococcus or a staphylococcus infection of the pleura has occurred. If gunshot and stab wounds of the chest be treated conservatively and if every pneumococcus empyema be promptly recognized and drained, the number of cases of chronic empyema with persistent sinus will be exceedingly small. However, I have no doubt that Lilienthal's procedure in selected cases is of great value. It certainly could not be used, however, in the treatment of the class of cases here under consideration, namely, cases of long-standing empyema with great thickening of the pleura. In the last year I have operated on seven of such patients, five of whom I have succeeded in curing, while two are awaiting further operation. All but three of the cases had been operated upon before and had persistent sinuses.

What, from a surgical standpoint, has impressed me most in the cases with persistent sinus, is the small diameter of the cavity, in none of these cases greater than 1 inch, and in some too small to admit the finger. Nature unaided had been able to reduce the dead space to this width. The length of the tract, however, was in most of the cases great. Of the three cases of long-standing but undrained empyema, one had a bronchial fistula communicating with the pus cavity, and the other two had relatively

* The effect of a large collection of fluid in a pleural cavity is to replace the negative pressure therein by a positive pressure. I have measured the amount of this pressure in two patients, the one an adult woman, the other a child of six. In the former case a hemothorax produced by a gunshot wound had displaced the apex of the heart, as shown by stereoscopic radiographs, to the midline. The pressure in the affected pleural cavity was twentyfour centimeters of water positive. In the child, the apex beat was in the right mammillary line, and from the chest in the course of eight hours we withdrew 1,500 c.c. of pus. The pressure here was only one centimeter of water positive. The explanation of this great difference in the two cases is that the mediastinal partition in the child is less rigid than in the adult. This fact explains the greater danger of draining an empyema in the child. In both these cases life was possible because a negative pressure was maintained in the unaffected side of the chest.

1. Lilienthal: *Ann. Surg.*, lxii, No. 3, 309.

small collections of pus enclosed in exceedingly thick-walled cavities. The latter cases were quite easily closed; the former awaits a secondary operation, the success of which is problematical.

The problem involved in the treatment of an old empyema is the same as that involved in chronic osteomyelitis, namely, the obliteration of an infected cavity which is surrounded by rigid and poorly vascularized walls. The cure is to be accomplished in the same manner in both conditions, by cutting away the firm walls on at least three sides and applying pliable structures with a good blood supply to the remaining wall. While I do not belittle the value of decortication of the collapsed lung in suitable cases, certainly it has no place in the treatment of the very chronic cases which I am considering. These can in most cases be cured, barring the presence of a bronchial fistula, and providing the operation is thorough going and not half hearted. I have used the following method of treating them:

The patient is placed in the position in which he can breathe most easily and operated on under local, or light general narcosis reinforced in either case with morphin. The skin is incised in the direction of the sinus, sparing the muscles as much as possible, and portions of the ribs about the sinus are cut away till the finger can be inserted into it and its interior explored. Using the finger inside the sinus as a guide, the ribs above it are resected subperiosteally and the periosteum of the ribs and the thickened pleura are cut away until the sinus is laid open throughout its entire length. The sinus may be at a depth of 3 to 4 inches from the surface, and in this case merely laying it open will not produce its closure. It is necessary to pull back the skin and muscles on each side and remove the bony and fibrous wall of the chest until the muscles and skin can be applied to the bottom of the sinus. Incising the visceral side of the latter or removing the unhealthy tissue from it promotes healing.

Bleeding is controlled chiefly by compresses. The intercostal vessels and the cut ends of the ribs are the chief sources of hemorrhage. The vessels can be secured by first resecting the ribs subperiosteally, and then clamping the vessels in contact with the freed periosteum. Ligatures must be sewed in with a stout curved needle, or they will slip.

Every case requires an especial procedure adapted to its requirements. For example, it may be best not to incise the skin in the line of the sinus, but to make a plastic flap of some

sort. This point can be determined either by a study of the radiograph, or by determining the direction of the sinus by means of the finger. But the direction of the skin incision is a matter of comparatively small importance. The main thing is to cut away the rigid bony and fibrous shelves which appear on each side of the sinus, when the same has been laid open. An important point of technic is to resect the ribs, before the periosteum or pleura is cut away. For rib resection I have found a sharp rongeur the best instrument since it can be used to tunnel out the ribs from their enclosing tissues without much hemorrhage or the necessity for a wide exposure. When the ribs are out of the way hemostasis is more easily accomplished.

The chief danger of the operation is hemorrhage, a certain amount of which is inevitable. For this reason the operation as described is done in several stages, the duration of each stage being determined by the condition of the patient. If this plan be followed and if care be taken to get the patient into good condition before each operation, the mortality will be practically nil.

I report the following case because of the long duration of the trouble and because of a complication which it is well not to overlook:

B. H., girl, aged 17. Since the age of 18 months the patient had had a thoracic sinus, which had followed the drainage of an empyema. She had been operated on eight times for the closure of the sinus. She was an anemic girl with a marked lateral curvature of the spine, the concavity being toward the affected side. The sinus was in the sixth right interspace, inside the mammillary line. It was discharging considerable amounts of pus. Radiograms showed complete opacity of the right side of the thorax.

Feb. 11, 1915, the mouth of the sinus was enlarged by resecting portions of two ribs so as to secure good drainage. A probe could be introduced upward and backward into the chest for 6 inches. Nothing more was attempted at this time because of the rather poor condition of the patient. April 9, 1915, the sinus was laid open by the technic already described and portions of the second, third, fourth, fifth and sixth ribs resected. A piece of badly decomposed rubber tubing about 3 inches long was removed from the top of the chest. This had evidently been lost years before, because bits of rubber were found imbedded to a depth of half an inch in fibrous tissue. After the removal of this tube the finger could be passed behind the first rib and clavicle into the neck. The sinus closed rapidly and has remained so.

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THE VALUE OF THE RENAL FUNCTIONAL TEST IN SURGERY *

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The object of this paper is not to bring forth any thing new in regard to renal functional tests of the kidney, but rather to present a few deductions and impressions gained from personal observation upon a limited number of patients. I hope in this manner to stimulate a discussion from which I myself may be able to learn something more concerning this subject.

An accurate knowledge of the condition of the kidneys is advantageous to both patient and surgeon before attempting any sort of surgical operation. There are a number of methods being used for this purpose. The reliability of these tests has as yet not been definitely determined, and although medical literature has been replete with articles concerning this subject it is my opinion that until the means have been discovered whereby an exact estimate of renal function is possible, the practical value of these tests will not be determined. I do not mean by this to imply that the renal functional test is of no value and has no place in surgery, but I am of the opinion that it is only after repeated tests and then in connection with the clinical data that the functional test is of value.

We all no doubt are acquainted with the different methods of renal functional estimation and a description of the various methods would have no place in this paper. In 1909 the use of phenolsulphonephthalein as a renal functional test was advanced and claims were made that in its use many of the objectionable features of other tests had been overcome. Since then numerous articles have appeared corroborative of this claim, which has strengthened the impressions in the minds of many that the results of the test either indicate or contraindicate surgical procedure, regardless of the clinical data. Or in other words, that the lowering of the functional capacity of the kidney below a normal mark would indicate renal pathology and render operation hazardous even in the absence of any clinical symptoms, or, on the other hand, that a normal functional capacity would exclude any disease of the kidney and render operation safe as far as renal disturbances were concerned.

In any surgical procedure the first question we ask ourselves is: Are the kidneys able to withstand the strain thrown upon them by the

operation and the anesthetic? If a functional renal test beforehand would give us the exact condition of the kidney, and if we could depend on the findings absolutely and could feel certain that a decrease in the secretory capacity was pathologic and not compensatory, then indeed renal functional tests would be most important, especially from a surgical standpoint.

Again, in a contemplated nephrectomy, if we could determine beyond a question of a doubt the exact state of efficiency of the remaining kidney, then, again, the value of renal functional tests would be of the greatest value to both patient and surgeon.

There are many conditions which bring about a functional change in the kidney, causing a temporary or functional decrease in the secretory capacity. It is necessary and essential to differentiate this functional change from the change due to pathologic conditions. As an example, we made a number of functional tests before and after anesthesia. Before anesthesia the phthalein output was normal, measuring from 30 to 40 per cent. for a two-hour specimen. In a majority of the cases which were given a functional test following operation, in which ether anesthesia was used, there was a decrease in the phthalein output, the average output, or the lowest output for any one case was 10 per cent., and there was no noticeable increase until thirty-six hours following the operation at which time the output measured 20 per cent. and was up to normal forty-eight hours after the anesthetic had been withdrawn. Had we placed too much confidence in the result of the renal functional test we would have expected renal complications during the first few days. However, there were no clinical symptoms of renal insufficiency and the urine was normal in amount, clear in color and of normal specific gravity.

In another series of cases in which the functional test showed a normal output, we obtained a greatly increased output in over 30 per cent. after the ingestion of large amounts of milk for a period of twenty-four hours, the amount of phthalein secretion coming to normal again twenty-four hours after the milk was withdrawn.

In several cases functional tests under different conditions gave widely different results, and it was only after repeated tests that we were able to arrive at any definite conclusion as regards the kidneys.

One case which was operated on showed before the operation a low specific gravity, a small amount of albumin and a scant and turbid urine. This patient gave a normal phthalein out-

* Presented before the Indiana State Medical Association at Indianapolis, Sept. 23, 1915.

put, but showed symptoms of renal insufficiency after operation, and this in spite of the apparent sufficiency as indicated by the functional test.

Another case gave a 20 per cent. two-hour output in the absence of other clinical data and had no symptoms of renal insufficiency following the operation. In view of these facts I am compelled to the belief that the renal functional test to be of value must be made repeatedly and then is of value from a surgical standpoint only in the presence of clinical symptoms, and that alone it is not to be relied on.

The renal functional test may show the degree of functional activity at the time it is made, but one cannot determine what the functional capacity will be a few hours afterward, or under other conditions, or when the existing lesion has been removed.

I endeavor to test the renal capacity on cases of cardiac insufficiency. I was able to collect only two cases of cardiac disease in which there was an old standing mitral lesion with a broken compensation. Both of these cases when subjected to the functional test showed a marked diminution in the phthalein output. At this time both cases were passing a normal amount of clear urine, free from albumin and of normal specific gravity. Insufficiency on the part of the kidneys was, from the character of the urine, a complication not to be feared. Both cases within a few weeks after the tests were made developed aggravated renal symptoms from which both died. In these cases the functional test certainly gave a timely warning. These cases, however, are only of value from a medical standpoint.

So far I have spoken of the value of the renal functional test in general surgical cases and have endeavored to show from my limited experience that the phthalein output is not to be relied on as an absolute criterion as to the condition of the kidney, and that there are many other factors to be considered before arriving at a conclusion. I do not mean to convey the idea that I place no value on the functional test, for, on the contrary, I think it a very valuable aid and especially as a prognosticator. In the majority of our limited number of cases the test was of great value, and especially when considered together with the clinical symptoms.

As to the value of the renal functional test when applied to the surgery of the urinary tract: Unfortunately my observations along this line are limited to a small number of cases. However, from a study of the material at hand I am forced to the belief that here again the

renal functional test, while of importance, is not to be relied on alone any more than any one clinical symptom.

Our most important observation in this class of cases, was with a case of recent prostatic occlusion in which the catheter had not been used and in which there was, in all probability, considerable back pressure upon the kidney. The phthalein output was less than 10 per cent. On account of a recent disaster with a case of this sort, and also on account of the low excretory capacity in this case, we refused to operate until conditions were more favorable. The patient became impatient at the delay, left the hospital, went to a neighboring city where he was immediately operated on, the prostate being removed. The patient died on the fourth day from nephritis, acute congestion of the kidney, renal insufficiency or whatever the pathology is that kills in this class of cases. Needless to say, I could not give the functional test too much credit for affording me this timely warning.

On the other hand, a case of long-standing renal occlusion in which the catheter had been used for over a year, showed, on first examination, a phthalein output of 15 per cent. After rest, diet and drainage of the bladder the output was increased to 40 per cent., and although the urine was scant, of low specific gravity and the twenty-four-hour specimen far short of the normal amount, the patient was operated on and made an uneventful recovery without showing the least sign of renal insufficiency at any time during convalescence.

In one of our cases with a tuberculosis of the left kidney, the urine from the right or normal kidney after urethral catheterization showed, on two different occasions, less than 15 per cent. phthalein output. From the diseased side the output was almost nil. The urine from the normal kidney was clear, of normal specific gravity, and contained no casts. There were no clinical symptoms of impending insufficiency on the part of the normal kidney. The diseased kidney was removed and contrary to our expectation, judging from the low secretory capacity, there was very little renal destruction. Three days after the operation the right kidney showed an output of less than 6 per cent., though it seemed to be performing its work satisfactorily and there were no clinical symptoms of insufficiency. The patient was given the usual care after such operations and on the sixth day the output measured 40 per cent. The recovery was uneventful and we felt no concern on account of the discrepancy in the functional test.

The fundamental weakness of all renal functional tests as an aid to prognosis is that while they may show the degree of functional activity at the time of the examination, one cannot determine from them what the functional capacity may be when the existing pathologic lesions are corrected.

CONCLUSIONS

My conclusions are based on a limited number of cases, which may not be a fair test, but until I have had a little more experience along this line I shall have to conclude that:

The renal functional test, from a surgical standpoint, is only of value in the presence of other clinical data.

That it should be used repeatedly on the same case.

That its greatest value is as an aid to diagnosis in doubtful lesions of the kidney.

The presence of a marked diminution of secretory capacity on one side is indicative of the the existence of a pathologic lesion. Its absence, however, will not exclude the possibility of a lesion.

If a surgical condition is present in one kidney, operation is indicated provided there is a fair amount of clear urine in the catheterized specimen of the opposite kidney and the patient shows none of the symptoms of renal insufficiency.

SOME SURGICAL DISORDERS OF THE UPPER END OF THE FEMUR *

BEN PERLEY WEAVER, B.S., M.D.
FT. WAYNE

Up until the very recent past, it is probable that no branch of medicine has developed so slowly as has the study of diseases of the bones and joints. And for this particular apathy, Leonard W. Ely,¹ in his contribution to the symposium on surgery of the bones and joints at the 1912 meeting of the American Medical Association, traced the blame to our blind reliance on clinical experience, rather than laboratory study, as the guide to treatment in this field of work. The facts are that with the advent of more exact and comprehensive studies from the pathologic, bacteriologic and Roentgen-ray laboratories, combined with painstaking team work with specialists and internists, the bone and joint surgeon of today

has a far greater responsibility to his patient toward fulfilling his moral obligation than he had twenty-five years ago, when his working criteria were those employed by his forefathers, namely, clinical experience alone. Today we are not proud of having been guilty of putting up a Colles' fracture, possibly without the aid of either anesthesia or skiagraphy, only to find subsequently that we have been scrupulously adjusting splints of one form or another for several weeks, to an unreduced fracture, and one wherein the carpo-radio-ulnar articulation is so altered that even normal flexion cannot obtain. Ten years ago, an overlapping of the fragments of a fractured femur to the extent of an inch was considered a good result but the present-day development of the intramedullary splint has given our patient the right to demand a better femur than that. Because a man can get around and earn his daily bread, even though his pelvis has an unwarranted dip to compensate for our poor workmanship, is not an earnest that we have done the best for him that can and should be accomplished. We are no longer satisfied to meet an old patient hobbling along the street with a fibrous union of the fragments of a fractured femoral neck or perhaps no union at all. I have one such to my own credit, and trust that her misfortune shall prove my lesson, for I feel that my work for her was only half done when I gave her abduction on a travois splint and did not add traction. The beautiful arthroplastic and transplant work of Murphy, Bloodgood, Albee and others makes us wonder if we are justified in our so-called conservative methods which so often leave our patients life-long cripples, if indeed their lives are not sacrificed. When we read of the brilliant work of Billings, Rosenow, Davis and others in the isolation of far-distant foci of infection and their relation to many forms of subacute and chronic arthritis, we are at once impressed with our responsibility toward our patients in respect to prophylaxis, for the prevention of such deforming diseases is an even greater achievement than their cure. In view, then, of all these latter-day achievements, it would seem that we are just entering the period of dawn in the nosology of bone and joint disease.

Among those who have chosen to base their treatment of bone and joint disease on the pathologic findings rather than clinical experience of the past, Ely ranks well in the foreground. His recent monograph on the subject² based on a careful laboratory study of 120

* Read before the Indiana State Medical Association at the Indianapolis session, September, 1915.

1. Ely, Leonard W.: Jour. Am. Med. Assn., July 20, 1912, pp. 194-195.

2. Diseases of Bones and Joints, Surgery Publishing Co., New York, 1914.

specimens, affords most fascinating reading for those interested in the subject of diseases of bones and joints. In the study of the diseases of these structures Ely bases his work upon the behavior of six tissues, namely, bone tissue proper, marrow, periosteum, cartilage, synovia and ligament. Bone tissue is the same wherever found, is not of itself subject to inflammation, and simply responds to its contained marrow, a mild irritation of the latter producing a hypertrophy of bone, whereas a stronger one produces an atrophy, and a very severe one kills the bone. Bone tissue is likened to



Fig. 1.—Morbus coxae in child 13 years of age. Sinuses injected with bismuth.

the walls of a factory in that all the activity is carried on inside. In the past our studies have been confined to the bone to the neglect of the more important structure contained therein, that is, the marrow. The classification of this tissue into its two types, the red and the yellow marrow, and the location of each throughout the body have been well known for many years, but their pathologic importance has seemingly failed of recognition. Ely is of the opinion that when we come to a realization of the cause for the acute pus infections attacking the marrow of the shafts, and tuberculosis of the extremities of the long

bones, just so soon will we relegate the bone curet to the obscurity which it deserves and cease to plunge a knife recklessly into a cold abscess, thereby converting a strictly localized and relatively harmless disease into a widespread and very dangerous one. His theory concerning the role of the bone marrow in tuberculosis will be taken up in greater detail later. In the study of the periosteum, there are recognized the two layers; the inner, cellular, and the outer, fibrous layer, the inner being analagous to the marrow of the subjacent bone and vulnerable to the same diseases, while the outer serves merely as an envelop with a purely mechanical function. Microscopic study of the periosteum suggests to him the correspondence between the inner layer of the periosteum and the synovial membrane, and between the outer layer and the ligament. The rôle of the articular cartilage is regarded as a purely passive one, not being of itself subject to inflammation nor disease save as it reacts to disease of the subjacent bone marrow and of the synovia. This latter structure, the synovia, may be looked on as a lymphoid structure with the same relation to diseases of the joint that is borne by the marrow to the bone. Indeed it may be involved in extension of disease of the marrow, and vice versa. Following joint destruction and ankylosis, the synovia and lymphoid marrow disappear and with them all chronic diseases peculiar to the joints alone as tuberculosis and those lesions often classed under the name of arthritis deformans. If this be true, one is at once struck by the uselessness of resection of joints or tedious dissection of synovial membrane and infected marrow, when the mere production of ankylosis will cure the disease. The ligament, like the fibrous layer of the periosteum, plays only the passive part of pure mechanical function. In all bone and joint disease then, the active part is taken by (1) the two kinds of marrow, (2) the synovia and (3) the inner layer of the periosteum; cartilage and ligament remain but passive structures and may, for all practical purposes, be ignored. The disease may start in one of the active tissues and spread to another, certain lesions showing a predilection for one, certain for two, and certain affecting all three of these tissues. For instance, acute articular rheumatism affects the synovia, syphilis the periosteum, the marrow, and rarely the synovia, gonorrhoea, the synovia, and rarely the marrow and periosteum, tuberculosis and pus infections all three.

Inasmuch as the original purpose of this paper was to take up only the surgical aspect of but

three or four disorders of the hip that have proved of particular interest to me, I shall pass over the acute infections as belonging more strictly to the domain of internal medicine. We come at once, then, to the subject of chronic arthritis which may be further classified into two types, the first being characterized by a proliferation of the synovia and of the lymphoid marrow with a resulting atrophy of the cartilage and bone, and the second type consisting of an exactly opposite condition, namely, an inflammation and degeneration of the synovia and of the marrow, with a resulting hypertrophy of the cartilage and bone. Type 1 may be made to include tuberculosis, chronic gonorrheal and syphilitic arthritis, the so-called rheumatoid arthritis of the English writers, or perhaps more correctly called atrophic osteoarthritis, of infectious origin in the vast majority of cases. Type 2 includes those cases of hypertrophic osteoarthritis of Goldthwait and the degenerative form of Nichols and Richardson, embracing also such conditions as Heberden's nodes and morbus coxae senilis. In illustration of the first type I desire to take up rather briefly the subject of tuberculosis of the hip, and of the second type, hypertrophic osteoarthritis of the hip, with the exhibition of both skiagram and specimen. I wish then to touch on the subject of malignancy and particularly carcinoma as it affects the femur, with skiagram and specimen of case, and before closing merely mention one or two practical points that have impressed themselves upon me in connection with fracture of the femoral neck.

Were I to confine the consideration of bone tuberculosis to a discussion of the disease as it affects the femur only and particularly as it manifests itself in children, I should probably have little warrant in including it under my title, since this stage is distinctly one for conservative treatment. But when one includes the adult form, involving as it does, most often, the synovia and hip joint, then the time for conservatism must often give place to more radical treatment. That tuberculosis of the hip is distinctly a disease of childhood is well known by Whitman's series of 1,000 cases wherein 839 cases were in children under 10 years, and of these 839 cases, 607 were under 6 years of age. Likewise are we acquainted with the fact that in childhood the disease is wont to affect the epiphysis, while in adult life the synovia is more apt to be involved. For this many explanations have been put forth, such as that the circulation is of necessity more active about the growing end of the bone and hence there is

greater opportunity for the deposition of tubercle bacilli by the blood in a place of comparatively lessened vitality. Another theory is that the terminal end arteries in the neighborhood of the epiphyseal line in children lack anastomosis and hence afford repositories for tubercle bacilli, yet there is no lack of anastomosis in the bones of the spine nor the short bones of the carpus and tarsus, and yet these areas are not infrequent sites for this infection. Likewise the frequency of synovial tuberculosis in the adult cannot be thus explained nor can the absence of the infection in the brain with its end arteries. Again, why should the tubercle bacillus be arrested by the end arteries and involve the joint end of the bone, while the staphylococcus is deposited at the same spot and involves the shaft of the bone, producing a suppurative osteomyelitis? Surely there is some logic in Ely's theory when, after recalling to our minds the fact that throughout the body tuberculosis manifests a marked affinity for

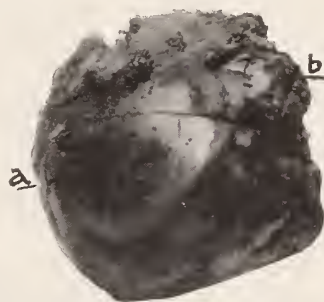


Fig. 2.—Hypertrophic osteoarthritis; (a) Eburation of articular surfaces; (b) Peripheral overgrowth of bone.

epithelial, endothelial and lymphoid tissue, rarely attacking any other tissues directly, unless mixed with a secondary infection, he reminds us of the two lymphoid structures in the region of the joint, namely, the red marrow and the synovia. Just as the lymphocyte has been proved to be the domicile of the *Treponeema pallida*, so we shall probably conclude ere long that it offers the pabulum for the tubercle bacillus instead of being its foe, as was formerly believed. Here, then, is the key to the therapy of joint tuberculosis. Time and patience may accomplish this result in the young by conservative means; at least this method should be given a thorough trial until such time as the epiphysis has exerted its function in growth. In the adult, however, and especially where time is an important factor, better results will probably result from radical treatment which means resection to the point of removing just enough of the ends of bones to secure apposition of bare bone to bare bone, producing an ankylosis, as by Albee's operation,

which consists, as you probably know, of chiselling off a piece of the head of the femur on a horizontal level with the neck and a corresponding area of the upper hemisphere of the acetabulum, after which the chisel is run throughout the joint to destroy the synovia and articular cartilages. It is both needless and futile to attempt to remove all the tuberculous tissue, for once the function is arrested, cure will follow in the average case under proper hygiene. Perhaps some day we may hope for the restoration of function by arthroplasty done after years of proved cure by such ankylosing methods as Albee's. The accompanying skiagrams graphically illustrate



Fig. 3.—Hypertrophic osteo-arthritis of head and neck of femur with lipping of the acetabulum.

the tragic result of a badly managed morbus coxae in a child whose process was first recognized in the abduction stage when he was 6 years of age—seven years ago (Fig. 1).

The hypertrophic form of osteo-arthritis of Goldthwait, illustrating the second type of chronic osteo-arthritis, manifests changes just the opposite from Type 1, in that, because of well-marked degenerative changes in the bone marrow, in the deeper layer of the periosteum and in the synovia, the bone and cartilage hypertrophy and encroach on the marrow and synovia. The articular cartilage proliferates and masses of new bone and cartilage are formed at its periphery, often giving rise to the

so-called "lipping" of the acetabulum. Coincidentally new cartilage and bone being produced underneath the articular cartilage, the marrow space is diminished by the formation of new bone and its blood supply to the overlying articular cartilage being thus cut off, the latter structure fibrillates, degenerates, and wears away, leaving the thickened bone bare and grooved in the line of joint motion. The peripheral cartilage, however, taking its nutrition largely from the periosteum and synovia, is not forced to this early degeneration and wearing away, but rather hypertrophies and may even be transformed into bony irregularities which, particularly in a ball and socket joint like the hip, interferes materially with motion. This condition is beautifully shown by the specimen here presented (Fig. 2), together with skiagram (Fig. 3), from a case operated on by Dr. Porter about two years ago for the relief of persistent and disabling pain in the right hip, which had begun two and a half years previously, following a fall, and getting progressively worse until the time of operation, at which time the patient was totally disabled, both because of exquisite pain and loss of function of hip. She was an otherwise robust, healthy woman, weighing 195½ lbs. and the mother of five children, with no antecedent history of acute infection, such as is deemed by Murphy and others the most likely cause for this form of osteo-arthritis. The latter gentleman has reported³ one case in his experience which followed a uterine sepsis fourteen years previous to the time of his observation of the case. Goldthwait⁴ describes the clinical symptoms of this form as of very slow development, the first thing occasionally noted by the patients being an inability to get at their feet to put on their shoes. While the disability may have been a long time developing, yet few symptoms are commonly associated with its production. There is usually an atrophy of the thigh and calf and a mechanical, not spastic, restriction of the motions of the hip joint. One of the earliest manifestations of the trouble is the peculiar restriction of flexion of the thigh, in that such motion must be accompanied by abduction, while rotation of the femoral head is markedly decreased in both directions. Hyperextension of the leg is usually impossible, there is a marked limp on walking and pain is a constant feature, even lying in bed on the opposite side often affording no relief. The foot is rotated out and often a slight shortening occurs as a result either of a

3. Murphy's Clinics, February, 1914.

4. Goldthwait, Painter and Osgood: Diseases of Bones and Joints, 1910, pp. 338-341.

flexure of the neck of the femur, change in the size of the acetabulum, or "mushrooming" of the head of the femur. The restriction of motion is not due to muscular spasm, but rather to the presence of the hypertrophied cartilage or bone. Indeed, there is usually some thickening perceptible in the region of the trochanter and neck of the femur, and this was perceptible even in the heavy woman from whom this specimen was removed. It seems to the writer that this sort of a condition would offer an ideal one for the application of Murphy's hip-joint arthroplasty wherein the lip, if present, could be removed, the acetabulum reamed out, the irregular head properly rounded off with the end-mill, and recurrence prevented and a useful, functioning joint restored by the interposition of a fascia-lata flap.

According to Bradford and Lovett,⁵ the variety of tumor which most often affects the head of the femur in children is a round-celled sarcoma of the periosteum, though the epiphysis is rarely the seat of the tumor, and its treatment, whether by removal of the growth or by amputation at the hip joint depends on the histologic structure of the tumor, the statistics not being favorable to amputation as a means of cure. Whitman⁶ states that sarcoma is far less common in the region of the hip than the knee, and Sutton⁷ asserts that though the femur is very liable to the periosteal form of sarcoma, yet the growth is most frequently associated with the lower third and invariably runs a rapidly fatal course. In the light of the more recent work of Bloodgood, Coley and others, this is, of course, not absolutely in accord with present-day facts. Further time will not be consumed in the discussion of sarcoma at this site than to say that both its prognosis and treatment are dependent on a knowledge of the location from which it sprang, whether central or periosteal in origin, and the type of the predominating cell.

Carcinoma of the upper end of the femur is practically always secondary to cancer in some other part of the body, chief among which are the prostate, thyroid and mammary glands, stomach, esophagus and uterus. Prostatic cancer manifests an especial tendency toward bone dissemination, Recklinghausen having pointed out that the cancer cells lodge in the vascular channels of the marrow, forming a deposit from which outrunners traverse the adjacent bone foramina and form subperiosteal deposits.

The frequency with which bone metastases are produced by mammary cancer is well recognized and it has been made a rule at the Mayo Clinic to skiagraph the bones of all cases of moderately advanced breast cancer before subjecting them to operation, for it is, of course, useless to attempt to remove the original focus when there are such widespread secondary deposits as would be manifested by such bone metastases. The most frequently involved bones secondary to mammary cancer are the sternum and ribs, such involvement being one of direct extension. Next in order come the femur, bones of the spine and humerus. The specimen (Fig. 4) with skiagram (Fig. 5) which I have to show you is a typical example of what occurs in bone metastasis from mammary cancer and was removed from the person of a large, otherwise healthy woman, a patient of Dr. Garrett Sweringen, whose breast was amputated for scirrhous carcinoma by Dr. Porter in February,

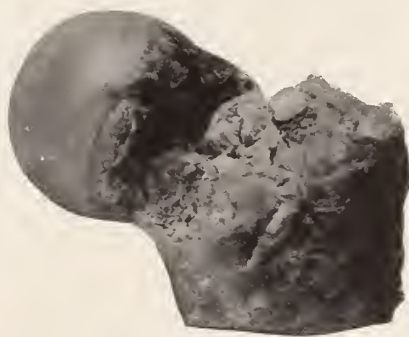


Fig. 4.—Marked destruction of neck of femur from metastatic carcinoma.

1913. Almost a year later she first began to have pain in the right hip, but like most women who have harbored the hope of cure by radical operation for cancer of the breast, she refused to believe that her hip pain had anything to do with her previous trouble, and Dr. Sweringen was not called to see her until the rarefaction presented in both the specimen and skiagram made it possible for an osteopath to fracture the neck of the right femur through her manipulative efforts. The patient now demanded any sort of treatment, operative or otherwise, that would promise relief from her excruciating hip pain, and accordingly had a resection of the right femur thirteen and one-half months after her mastectomy. This patient lived in comparative comfort for about nine or ten months, when she began to manifest symptoms of a metastasis in the central nervous system and died from a probable metastatic carcinoma of the brain, although no postmortem was permitted.

5. Bradford and Lovett: *Orthopedic Surgery*, 1913, p. 166.

6. Whitman, Royal: *Orthopedic Surgery*, 1910, p. 414.

7. Sutton: *Tumors, Innocent and Malignant*, 1906, p. 78.

There is not sufficient time left to take up the subjects of dislocation and fracture of the head and neck of the femur, but there are two brief points concerning fracture which I desire to mention, that are of practical import to me at least. The first is in regard to skiagraphy in the diagnosis of fracture of the femoral neck and pertains particularly to such fractures as are suspected of being impacted, and that is that the neck of the femur should be gotten in as nearly a horizontal plane as is possible, for the slightest inward rotation of the femur will give the appearance both of shortening of the neck and what seems to be an impacted fracture. This point was vividly impressed on me



Fig. 5.—Pathologic fracture of carcinomatous femoral neck.

by a case of Dr. Beall's wherein the Roentgen-ray diagnosis of probable impacted fracture was made in a patient who a week later got up and walked out of the hospital. The other point is in regard to the abduction treatment by means of a plaster cast without traction, being advocated by Whitman, and recommended in certain cases by means of the travois splint, by Murphy. My own case mentioned earlier in this paper wherein only fibrous union was obtained was treated by abduction by the travois splint without traction, with the result that at the end of a year there is not only lack of bony union, but a shortening of at least 1 inch, both of which I believe would have been obviated by properly applied traction.

DISCUSSION

DR J. H. OLIVER, Indianapolis: This subject of diseased joints is one which has been very much neglected. A greater incentive to study bone and joint diseases has followed the introduction and practical demonstration of the uses of the radiograph. With the advent of the skiagraph the terrific deformities simply shamed the profession into taking up the subject again. It went on until it came to a point where I was somewhat amused some years ago to note in a review of a modern textbook that the reviewer was pleased to congratulate the author in really giving to a section of the book a named chapter, Dislocations and Fractures. Dr. Ely's information as to the presence of bloody marrow in the bone has saved us the hard, tedious task of dissecting out of material, and made joint resection easy of procedure. I have had two cases of hemometastasis, one from double cancer of the breast in which no operation was performed, in which the patient's attention first was called to the trouble when rolling over in bed and fracturing the breast bone. A second was one in which during a period of some three weeks in a hospital a sarcoma resulted in hemometastasis of the hip joint, in which time there was a hematosis deformity.

Following on down the line of the doctor's paper, I would come to the subject of fractures of the neck of the femur as well taken. Any fracture should be left alone unless the deformity is great. It is done from the almost universal habit of giving an anesthetic, which I find very frequently deprives the individual of a very excellent chance of having a good limb thereafter. When the deformity is great it should not wait another three months without operative attention. I have found in one case the head and neck of the femur so softened that it was not possible to insert the instrument to sustain it. If we are going to operate on these cases of unimpacted neck of the femur it should be done in the first few weeks if we are to expect success. I thank the doctor for bringing forward a very interesting paper and a very timely one.

DR. WEAVER (closing): There is very little to discuss after Dr. Oliver's interesting remarks. I have very little faith in the operative treatment for this case of mine because there was more or less atrophy of that bone.

I had hoped some one might go into the subject of the abduction treatment of fracture of the neck and shaft, the treatment known as the movable triangular floor. The abduction treatment is ideal if it uses the traction, but even the Whitman by means of the travois splint is not ideal.

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EDITORIALS

TRANSFUSION OF BLOOD

Until very recently the technic of doing a transfusion entailed so many difficulties that the operation could be undertaken only by those who had sufficiently perfected their technical skill in vascular surgery. A variety of cannulas, instruments, special tubes and so on, have been devised to simplify the operation and to make it easy and simple enough to be carried out by any one with average ability in clinical hematologic work. Many of these devices already have been discarded, and no doubt some of those in vogue now will be discarded in the future when newer and better methods will have been introduced.

This therapeutic procedure is no longer regarded with the great awe with which it has been looked on hitherto. One no longer needs special forms of apparatus of any sort. All one needs to do is to withdraw, by means of a sufficiently large syringe, blood from the vein of the donor and inject it into the vein of the recipient. The blood may be prevented from clotting either by having the syringe and needle lined with a thin film of paraffin—which can be done very easily, or by the addition of about 2 per cent. sodium citrate solution. This method strikes one as being the easiest of all proposed up to the present. It can be carried out by any one at all familiar with clinical blood work.

Before attempting the operation several important precautions must be observed: the blood must be taken from a perfectly healthy person, and if there is any doubt, even a Wassermann test should be made; and the blood of both donor and recipient must be tested to make sure that neither one will hemolyze the other. It is thought that some of the unfortunate results in the past, following soon after transfusion, may have been due to the effect on the recipient of hemolysis of the blood.

The conditions in which transfusion of blood is indicated can be included in the following

three groups: (1) anemia; (2) the so-called hemorrhagic diseases; and (3) certain forms of poisoning, such as poisoning with carbon monoxid gas.

1. In pernicious anemia the results with transfusion have been disappointing, but in secondary anemia transfusion has often been the most helpful therapeutic procedure in the treatment of the anemia.

2. The hemorrhagic diseases form one of the most interesting groups in clinical medicine. In that group of diseases blood therapy is probably the most efficacious form of treatment we have to offer. The quantity of blood needed may vary from a few cubic centimeters to a pint or more, depending on the clinical aspects of the individual case. Just how it acts is not known, but the value of it in these diseases has been definitely established by an experience that leaves hardly any room for doubt.

3. Recently the successful application of transfusion in cases of carbon monoxid poisoning has been announced. Another field for the use of this method of treatment has thus been opened up. Probably other forms of poisoning will be found amenable to this treatment. Developments along these lines will be watched with the greatest interest, not only by physicians but by the laity as well.

Physicians generally should interest themselves more and more in this subject of transfusion. They should realize that when properly used transfusion can be one of the most successful forms of treatment that may be applied. For that reason it ought to be more popular than it is at present. The physician ought to know the indications and the limitations of this operation, and he ought to be prepared to carry it out himself whenever called on to do so in an emergency.

TYPHOID VACCINATION

It is said that the Japanese soldiers went into the Russian campaign prepared as fully against bacilli as against bullets, and at the end of that war their percentage of death from disease was the lowest ever known in any great campaign. The experience was not without its lesson, which has been adapted to the great European war now going on, and when the history of the European war is written it will be found that the record of deaths from disease is the lowest in all history. Just now we are hearing a good deal about "preparedness," and yet we doubt if our American soldiers and sailors will be as

well protected against disease as was the Japanese soldier in the Russian campaign, or the soldiers fighting in Europe today, unless the medical department of our army and navy are given more powers than they possess at the present time. There are certain scientific facts that have been established beyond a question of doubt, and the ranting and ravings of the members of the League for Medical Freedom, the Christian Scientists, antivivisectionists, and the whole horde of fanatical obstructionists to the wheels of medical progress, should be given no attention when it comes to the question of giving our army and navy officers the power to enforce sanitary and medical rules required for the protection of our soldiers and sailors. A great hue and cry has gone up concerning the dangers of typhoid vaccination, and some of the Christian Scientists in particular are arguing against the compulsory typhoid vaccination of our soldiers and sailors. But the fact is, typhoid has ceased to be the great destroyer of armies, and all through the beneficial effects of vaccination rather than the increased attention to sanitary conditions. In 1898 we had about 25,000 cases of typhoid fever in the army. In 1913—the first year after the army had been completely immunized by vaccination—with 95,000 troops serving in the United States and all of our insular possessions, and with 10,000 men in camp along the Mexican border, we had four cases of typhoid fever, two of which were recruits who had the disease before joining the army. Typhoid fever is, therefore, no longer to be dreaded either among the military or civil population of this country if the beneficial effects of typhoid vaccination are secured. Among civilians typhoid vaccination is a volunteer measure and deserves more general encouragement on the part of the medical profession. Few communities are entirely exempt from typhoid fever, and during the summer months when people travel about much there is the ever-present danger of contracting typhoid from an infected food or water supply. The people should be encouraged to secure immunity through typhoid vaccination just as they secure immunity from smallpox through vaccination.

UNBIASED SURGERY

Dr. Richard C. Cabot, in the *American Magazine*, says that unbiased surgery is rare, and for the reason that it is difficult for the patient to secure honest judgment when there is the temptation of a fee staring the surgeon in the

face. In other words, the surgeon is obliged to possess an unusual amount of honesty to decide that an operation is not necessary when he knows that by making that decision he will get a very small fee as compared to the fee that he will receive if he advises and the patient accepts operation.

We are of the opinion that many surgeons are influenced by the fee, and especially those surgeons who have built up a business and are depending for business on the practice of fee-splitting. Some conscienceless general physicians do not want to have anything to do with a surgeon who does not operate the patient who has been "primed" for the operation. However, we do not believe that it is a rare thing to find surgeons who are eminently honest and whose advice is conscientious, unbiased and uninfluenced by the prospect of remuneration. So many examples are being presented to us constantly that we are even tempted to believe that medical men, as a class, are more inclined to be unbiased, even at the expense of their pocket-books, than any other class of people. But if there is any truth in Dr. Cabot's reasoning, the public should be willing to take away the temptation by admitting that the successful conduct of an important case is deserving of just as much remuneration in cold cash whether an operation is performed or not. Medical fees should be based on good judgment and responsibility as well as manual dexterity in operative work.

OPERATING ROOM ILLUMINATION

Various medical journals have been discussing the question of the desirability of getting away from having everything white in operating rooms. Several surgeons have been experimenting with different colors, and one surgeon has gone so far as to have everything in black, even to the sheets and operating gowns. We are disposed to believe that it is a good plan to get away from the pure white, which is tiring to the eyes, and especially to do away with glazed surfaces which are very objectionable through reflection. Still it is quite unnecessary to go to the extreme and adopt black, which makes it necessary to increase the amount of artificial light in order to illuminate the field of operation as well as the surroundings; and we cannot quite agree that green, though restful to the eyes, is very much more desirable. There are, however, some of the soft shades of gray which are restful to the eyes, while at the same

time giving an appearance of cleanliness and interfering but little with illumination. An operating room with walls, ceiling and floor in a soft tint of gray, and in the flat or dull finish so as to avoid reflection, makes an ideal color scheme which does not tire the eyes, and is all that could be desired from an esthetic point of view. If the surgeon desires to carry this still further he can have his gowns and coverings for the patient and tables in gray tints, though that is quite unnecessary.

Furthermore, it should be remembered that the question of illumination has much to do with comfort for the eyes of those who are obliged to be in operating rooms for any considerable length of time. Too much illumination is just as bad as too little illumination. The tendency to have an operating room lighted on two or more sides in addition to having a skylight, may prove objectionable if there is considerable sunlight or considerable reflection. The softest light is that from a northern exposure, and when it comes to artificial illumination, the powerful light from numerous high-power tungsten lamps is quite sufficient to tire even the strongest eyes. Theoretically, it is far better to have less light and have it properly directed and subdued than to be annoyed by the discomforts from undue brilliancy. In fact all of our ideas concerning illumination are undergoing a change and our efforts to secure uniform and sufficient illumination in our offices and residences by using indirect illumination are beginning to be used in operating rooms, and with no little success. Brilliancy of illumination does not mean possibilities for better work, and it does mean discomfort for the operator.

DO DOCTORS CHARGE FEES FOR A TRADE OR FOR A PROFESSION?

A young physician, well equipped in every way for the practice of his profession, complains concerning the difficulties encountered in competing with some of the older physicians who charge ridiculously low fees. He tells us that he made several trips, often times in very inclement weather and over bad roads, to see a patient residing 3 miles in the country, and rendered a bill which called for charges that were approximately \$3 per visit. The patient promptly produced receipted bills from a well-established older physician showing that the customary charges per visit for attendance on the patient had been \$1.50 each. This incident

reminds us of the story that is told of a well-known doctor who was asked to make a midnight trip to a farmhouse several miles in the country, by a man who requested the privilege of riding out with the doctor. On reaching the farmhouse the doctor was tendered the \$3 which had been agreed on as the charge for making the trip, and told that there was no patient to receive attention, and that the request to make the trip came through a knowledge that the charge would be less than the charge of a liveryman who wanted \$5 for rendering the same services in the way of transportation. Is it any wonder that young physicians become discouraged when they are obliged actually to compete with so-called professional men who cheapen labor, to say nothing of professional services, to a greater extent than labor is cheapened by the ordinary tradesman or workman? As one young physician aptly remarked, "I can run an automobile livery and make more money per trip than is made by the average doctor in my town for similar service with professional services included." And worse than all else, the doctor who aims to secure fair compensation for his services generally finds some of his confrères advising patrons that such charges are unjust. In fact, every time a doctor has to sue for a fee it is generally found that opposition to paying the fee, even though such fee may be customary, has been stimulated by some jealous or trouble-making doctor.

BEWARE OF SQUIRRELS, MR. WORKS

Surgeon-General Rupert Blue was on the stand recently answering certain questions put to him by Senator Works of California. Mr. Works, it will be remembered, recently introduced a resolution urging Congress to make it unlawful for Dr. Blue to retain his membership in the American Medical Association, of which he is president-elect. In the course of his questioning Senator Works referred to the efforts of the Public Health Service to eradicate squirrels for the prevention of plague dissemination. It developed that Senator Works is opposed to killing squirrels. For the life of us we cannot understand why! Even if Mr. Works' peculiar beliefs cause him to reject scientific facts regarding the carrying of plague by squirrels, he must surely know that these little animals are a constant menace to nuts. Has self-preservation ceased to be the first law of nature with Mr. Works?

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

THE Indiana medical profession should be well represented at the Detroit session of the American Medical Association. In fact, the general attendance at Detroit should be larger than at any session of recent years in view of the central location. The program should be of special interest, and Detroit is an ideal convention city, and especially so in the early summer.

AGAIN we remind secretaries that a printed program for a medical society meeting will not answer as copy for proceedings, and a printed program cannot be used as an announcement for a meeting unless it is received a sufficient time in advance so that it can be used in the number of THE JOURNAL that will be mailed to readers on a date preceding the meeting for which the program is offered.

THE Fort Wayne Medical profession has begun active work in connection with the coming session of the Indiana State Medical Association. It is expected that the visitors will be entertained in a very satisfactory manner, and the Committee on Scientific Work promises a program of unusual excellence. Several distinguished guests will take part in the meetings of the various sections and the public meeting to be held in the evening of the second day.

AND the Christian Science burial service was held over the remains of a regular physician, who for many years practiced in one of the towns of northern Indiana! Isn't that enough to make Hypocrates turn over in his grave! Unfortunately, when a man is dead he has little to say concerning the arrangements for his funeral services, but we presume that the old doctor, whose remains were the subject of a Christian Science funeral, probably turned over

in his coffin and said, "Well, the poor fools don't know I'm dead, they just *think* I'm dead, for disease and death alike are figments of imagination to the Christian Scientist."

ONCE again permit us to remind our readers that firms or agents soliciting orders for physicians' supplies should be investigated before patronage is extended to them. We are reminded of this because doctors are offered drugs and supplies of every description at so-called cut rates by several firms who are not especially worthy of confidence. And this leads us to the further suggestion that our readers will do well to patronize those who advertise in THE JOURNAL rather than firms of unknown reputation or perhaps having no interest in Indiana physicians other than to get what they can out of them. THE JOURNAL protects its readers by carrying only approved advertising, and advertising of perfectly responsible and trustworthy firms. Whenever we find that an advertiser is not worthy of confidence, that minute the advertiser ceases to be a patron of THE JOURNAL.

The *Warsaw Times* and the *Goshen News-Times* are two Indiana newspapers that deserve great credit for a stand for principle. Both of these newspapers refused to carry the advertising of the United Doctors, and both came out in half-column articles denouncing the United Doctors as frauds and impostors. In all probability the United Doctors will cancel their Warsaw and Goshen dates, for it is not likely that they would find their visits profitable after a severe scoring from leading newspapers. The example that has been set by these northern Indiana newspapers should be followed by other newspapers that are owned and controlled by men who have a desire to protect their readers from imposition, and who likewise have a tinge of conscience which precludes the possibility of accepting money which every intelligent newspaper man knows would be perpetuating a fraud.

ANY doctor who is tempted to use a new remedy should inquire as to whether such remedy has been passed on by the Council on Pharmacy and Chemistry of the American Medical Association. Furthermore, every doctor should possess a copy of the 1916 volume of New and Nonofficial Remedies published by the American Medical Association, which contains descriptions of the articles which have been accepted by the Council prior to Jan. 1, 1916.

There is absolutely no reason why any physician should be guilty of prescribing a remedy the action and ingredients of which are unknown to him, and about which he has only the word of the manufacturer. The Council has been established for the distinct purpose of protecting the medical profession and the public against fraud, undesirable secrecy and objectionable advertising in connection with proprietary medicinal articles, and doctors should determine the Council's findings before using any new remedy.

If physicians really want to do something to further public health service they can accomplish a great deal of good by encouraging newspapers to print the health news items furnished regularly by the United States Public Health Service. The copy is supplied gratuitously to any and all newspapers, and contains short and concise information concerning public health matters which convey information that should be known by the public. Ask the editor of your favorite newspaper to start a department of public health or a department to be known as health news, and to use the copy supplied by the United States Public Health Service. In the same connection, volunteer to furnish articles concerning various phases of disease prevention, and especially the diseases that are prevalent at the time the article is printed. These articles should be published under the authority of the county medical society and not be signed or give prominence to any one physician.

THE Federal Department of Public Health is sending out a great many news items concerning sanitation and health preservation for publication in newspapers, and it is hoped that publishers from one end of the country to the other will take advantage of the opportunity to give the public trustworthy information concerning many matters that through ignorance or indifference are ignored. A recent pamphlet covers the subject of cleanliness in grocery stores as an essential to wholesome food supply, and people are advised to shun the stores whose shelves and counters are laden with dust and infested with flies, bugs and vermin. The method adopted by the health boards in some cities and towns, with the cooperation of the state board of health, is to furnish a colored placard for use in a conspicuous place by those merchants whose places of business are found in a sanitary condition. Food that is contaminated in any way, and is afterward shipped, and coming under the interstate commerce laws,

may be seized and the parties responsible for the shipment may be prosecuted under the federal law.

How many doctors demand and take advantage of a cash discount when purchasing supplies or equipment? It has been said that the average professional man waits sixty to 120 days before paying his bills. Probably he gets into this habit because his patrons also are slow in paying bills. There are, however, some doctors who pride themselves on maintaining first-class credit and make it a rule to pay all bills within ten days after they have been contracted. It is almost the universal rule among jobbing houses to grant a discount of from 2 to 5 per cent. for payment of bills within ten days, and doctors should take advantage of this discount as a matter of money saving. Furthermore, there is no reason why houses that are selling physicians' equipment and supplies of any description should not be willing to give a cash discount, as otherwise there is no incentive for anyone to pay promptly if it is known that a delay of sixty to 120 days makes no particular difference. Supply houses ought to make it an object for physicians to pay bills promptly, and if any one pays the penalty it should be the man who is slow pay, and not the one who pays promptly. Without a discount allowance the prompt paying customer is penalized.

To those who have followed the printed proceedings of the trial in the suit of the Wine of Cardui manufacturers and exploiters against the American Medical Association, it is discovered from the evidence presented that Wine of Cardui has been used as a beverage by a considerable number of people, thereby proving conclusively the contention of *The Journal of the American Medical Association* that the one and only thing which keeps up the sale of many of the nostrums like Wine of Cardui is the alcoholic content with its stimulating and exhilarating effect on the user. But in reading the evidence, we have wondered if the promoters of Wine of Cardui have not counted on the profit to be derived from wide dissemination of the fact that Wine of Cardui may be used as a beverage. Is it not possible that the sale of Wine of Cardui will be promoted in certain localities, and especially in dry communities? Just at the present time newspapers all over the country are burdened with "tanlac" advertising, and it would seem to be the chief aim of the promoters to publish testimonials. It is

surprising to note how many people have been rejuvenated by "tanlac," but it is easy to understand this when it is known that the principal ingredient of "tanlac" is alcohol. The addition of a small amount of licorice, aloes, cascara, and gentian does not in any way alter the fact that if those who are obtaining results from "tanlac" will procure a little sherry wine or whisky they can secure essentially the same rejuvenating effects that are obtained from "tanlac." With the general spread of prohibition the sale of nostrums like "tanlac," "Wine of Cardui," "Hostetter's Bitters," and a number of other well-advertised proprietaries and patents having inebriating qualities, will be increased.

AND now *The Journal of Naprapathy* is announced! We admit that we never knew there was such a system as "Naprapathy" for the curing of disease, but inasmuch as a new cult springs up about every time the moon changes, it is not surprising to hear of old fakes traveling under a new name, for be it known (as announced) that "Naprapathy is a method of curing disease by use of the hands in the treatment of diseased ligaments." *The Journal of Naprapathy* appears to be a circular making a bid for dupes who will accept the offer of free treatment at the so-called "internery," said to be conducted in connection with the Chicago College of Naprapathy. Those who appear for treatment are given a free examination, and if, in the judgment of the chief manipulator, a cure can be effected (and probably a cure is promised in all cases) the case is given attention.

We are told that many of these bone, joint, and ligament manipulators and adjustors first "saw the light" while occupying positions as "rubbers" in Turkish bath establishments. At all events, it is a little remarkable that some of the sufferers who are giving up their good money for indifferent massage at the hands of chiropractics, neuropaths, naprapaths and some other rubberpaths are not profiting by common knowledge by taking their aches and pains to the Turkish bath establishment; and the wonder to us is that more bathhouses do not add professional signs to their doors and lay claim to some peculiar form of treatment for curing disease. Surely it is not because of a lack of suckers who will bite at the bait.

MANY of the dentists are taking advantage of an opportunity to become associate members of medical societies. This is a step in the right direction, for the dentists need, and need badly,

the information that may be obtained through contact with progressive members of the medical profession, and, on the other hand, the medical profession needs the information that may be obtained through closer contact with dentists. Now that we are tracing so many constitutional disturbances to absorption from mouth infections, not the least of which are the abscesses in and about the teeth, it becomes necessary for physicians and dentists to cooperate more than they ever have before. No longer is it possible for a dentist to succeed if he is purely a mechanic—and about all you can say of some dentists is that they are good mechanics and are painfully ignorant of even the rudiments of bacteriology and pathology. They may have been taught something concerning bacteriology and pathology in their dental schools, but they have quickly forgotten all that was taught them. It is a hopeful sign of the times that in many metropolitan centers the dental surgeons are working hand in hand with progressive members of the medical profession and making phenomenal advances that will be of great value not only to the public but to medical men who need the intelligent assistance of progressive dentists. Therefore, our medical societies should encourage a closer relationship between the professions of medicine and dentistry, and this can be accomplished in no better way than by joint meetings of dental and medical societies, and making dentists welcome to any of the meetings of our medical organizations. Furthermore, the dental schools ought to be in close affiliation with medical schools so that students can have the advantage of such instruction as is co-related.

MANY of our readers will remember the early numbers of THE JOURNAL and our insistent harping on the subject of the necessity of having energetic and enterprising secretaries for medical societies. What we had to say on the subject may or may not have borne fruit, but at all events many of the medical societies in Indiana now have secretaries that are hustlers, and who feel that the responsibilities of office deserve something more than perfunctory performance of duty. At best the office of secretary is a thankless job, but some one must do the work, and, while it is the members themselves who furnish the mental food for consumption, yet it is the secretary who gets up the menu, and through his efforts secures attendance at the feast. There are many ways by which to encourage attendance at medical society meetings.

Some men go without invitation, others have to have an invitation with all the frills, others have to be coaxed, and still others have to be clubbed. It is a wise secretary who knows just how to handle his membership. On the whole, attendance is maintained if the meetings offer something that is of value in every-day work, and offers it in a palatable and assimilable way. The doctor who really needs the medical society most is the one who rarely attends. Likewise, the doctor who is least busy is the one who stays away. The "live," progressive, capable and busy physician is the one who is on the front seat of medical societies.

We have been favored with some unique invitations and programs of medical societies, some of which have been published in *THE JOURNAL*. One which came too late for insertion in the April number of *THE JOURNAL* displays no little wit, and is sufficiently pointed in its application to bear publication. It is as follows:

FORT WAYNE, IND., April 5, 1916.

Dear Doctor:—There was once a doctor who never attended medical societies of any sort. Every time he had an idea it left a scar. He never had anything on his mind but the meninges, and when he came to die he didn't have brains enough to become unconscious. It was a terrible death.

Take thirty grains of enthusiasm thymol and rout the hookworm of indifference from the vitals of your medical existence and come to the Spring Meeting of the Twelfth District Medical Society in Fort Wayne, April 12. The men on this program will travel over 1,200 miles to make this meeting a success. It certainly will not make you footsore or weary to travel the short distance to Fort Wayne to do your part. I have made a mind bet that there are 125 men in this district still capable of enough enthusiasm to look like balls of fire for at least one day. Do I lose?

Very sincerely yours,

MILES F. PORTER, JR., Secretary.

WE publish in the Correspondence Department of this number of *THE JOURNAL* two letters that bear on the subject discussed in our editorial entitled "The Equitable Stings its Medical Examiners," which appeared last month. It is quite possible that many doctors and not a few agents can produce testimony to prove that many questionable practices have been resorted to by the Equitable, and probably by other insurance companies, in obtaining business.

A few years ago the Equitable and some of the other large insurance companies were investigated, with the result that some very startling disclosures were made concerning mismanagement. That there is room for still further investigation is very evident, for the Medical Department of most any of the well-known insurance companies will not bear critical investigation if conscientious and efficient management is a consideration sought by those who wield the destinies of the companies. For instance, it long has been known that appointments as medical examiners do not necessarily depend upon fitness for the position, and it is a rather common thing for appointments to go to the medical men who are willing to take out policies. It is also a well-known fact that agents do not as a general thing take their prospective policy holders to examiners who are known to be capable and conscientious, but to the examiners who give the most superficial examinations and who pass the most "risks."

In many localities the better class of medical men will have nothing to do with life insurance examinations, and for the reason that aside from the fact that the service is not adequately paid for by such companies as the Equitable, it is well known that the examiner has to stultify himself if he expects to secure many examinations or to avoid incurring the lasting enmity of the agent.

There certainly is room for improvement in the management of the medical departments of our great life insurance companies, and one of the first things necessary is to get rid of a whole lot of Chief Medical Examiners, Medical Referees, and Medical Inspectors, who, for the sake of their own positions, are more interested in making a showing as to economy in expenditures than they are in making a showing for efficiency; and it should be clearly understood in the beginning that it is not the officers or board of managing directors that primarily are at fault in the creation and maintenance of medical departments in insurance companies that are open to severe criticism. Medical men holding offices in the insurance companies are solely responsible for such conditions. As one of our correspondents points out, our state and national laws have undertaken to regulate certain abuses in our large insurance companies, but no attention has been paid to the flagrant abuses that appear in the management of the medical departments of those insurance companies, and the time is ripe for an investigation and the adoption of methods for a correction of the abuses that prevail.

DEATHS

ALBERT S. SMITH, M.D., died at Madison April 18, aged 79 years.

ISAAC H. BOWERS, M.D., 53 years of age, Indianapolis, died April 16 from heart trouble.

WILLIAM I. WOLPERT, M.D., Elizabeth, died April 18 from uremic poisoning; aged 56 years.

LAFAYETTE MARTIN, M.D., Batesville, died April 14, following a long illness. He was 69 years of age.

ARTHUR H. SMITH, M.D., Orland, died at Lutheran Hospital, Fort Wayne, April 9, aged 50 years.

NORA LINDENMUTH, wife of Dr. E. O. Lindenmuth, Indianapolis, aged 38 years, died April 25.

FELIX B. ROBISON, M.D., formerly of Monticello, Ind., died April 3 at Coldwater, Mich., aged 73 years.

HUGH H. ELLIOTT, M.D., Rushville, died suddenly April 5 from heart trouble. He was a graduate of Miami Medical College.

JOSEPH D. ASPINWALD, M.D., Warsaw, a former physician of New York City, but an invalid for nineteen years, died April 2.

WILLIAM H. WARE, M.D., Clark's Hill, died March 25 from pneumonia. He graduated from the Cincinnati Medical College in 1869.

CLARE SKILLMAN, M.D., Roachdale, died April 3 at Indianapolis Hospital, where he had gone for treatment. He was 55 years of age.

JOHN KENNEDY, M.D., aged 83 years, Paragon, died April 20 after an illness of two months. Graduate of Cincinnati Medical College.

CYRUS N. HAROLD, M.D., Indianapolis, died April 19 at Mayo Hospital, Rochester, Minn., following an operation, aged 61 years. He was a graduate of the Physio-Medical College of Indiana and a member of the National Physio-Medical Society.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

GENERAL

BORN, to Dr. and Mrs. C. C. Rayl, Monroe, April 7, a girl.

DR. W. H. VAN DOREN, formerly of Chicago, has located at Indiana Harbor.

BORN, Saturday, April 8, to Dr. and Mrs. M. R. Pollom, Stockwell, a son.

THE office of Dr. L. L. Quick at New Waverly was destroyed by fire April 6.

THE General Hospital at Elkhart is to erect a new \$12,000 home for its forty nurses.

THE new addition to the Methodist Hospital at Indianapolis is ready for occupancy.

WORK has commenced on the erection of the new Witham Memorial Hospital at Lebanon.

DR. A. J. BANKER's wife, Columbus, who has been very ill for quite awhile, is now improving.

LAFAYETTE is in the midst of an enthusiastic campaign for the rebuilding of Home Hospital.

DR. FRANK E. ABBETT, Indianapolis, has returned from an extended stay at Palm Beach, Fla.

DR. AND MRS. S. C. NEWLIN, Anderson, have returned from Florida, where they spent the winter.

DR. T. W. OBERLIN, Hammond, was called to Mansfield, Ohio, April 17, by the death of his father.

DR. C. L. ARMINGTON, Anderson, has recently returned from Florida, where he spent the winter.

DR. GROVER PRITCHETT has been appointed as city health officer of Muncie, to succeed Dr. N. D. Berry.

DR. ERIC CRULL, Fort Wayne, was reelected president of the Fort Wayne Motor Club at a recent meeting.

DR. H. N. MCKEE, Covington, has sold his practice to Dr. J. W. Aldridge, who took possession April 1.

DR. AND MRS. E. S. BAKER, LaFayette, have returned from Ocean Park, Calif., where they spent the winter.

MR. JOHN A. PATTEN, of the Chattanooga Medicine Company, manufacturers of Wine of Cardui, died April 26.

APRIL 1 Dr. H. D. Wood, Angola, celebrated the fifty-first anniversary of his practice of medicine in Steuben County.

ABOUT twenty-five doctors from Elkhart County enjoyed an outing and chicken dinner at Lake Wawasee April 20.

SEVENTEEN young men took competitive examinations at Indianapolis on April 14 for positions as interns at the City Hospital.

A TRACT of 34 acres of land has been added to the Southeastern Hospital for the Insane at Madison, making a total of 374 acres.

MRS. H. N. OLIPHANT, wife of Dr. Oliphant of Frankfort, recently underwent an operation at the Presbyterian Hospital, Chicago.

DR. JOSEPH RILUS EASTMAN, Indianapolis, delivered the address on Surgery before the Iowa State Medical Association, May 12.

THE contract for the new Bartholomew County Hospital at Columbus has been let and work on the building begun early in April.

DR. F. D. NORTON, Hope, Ind., who has spent two months in Biloxi, Miss., has returned home. Mrs. Norton and son, Earl, will return sometime in May.

DR. JAMES C. ROSS, Marion, was called to Washington, D. C., the middle of April by the serious illness of his wife in a hospital in that city.

DR. B. M. JEWELL, Gary, is taking care of the practice of Dr. John Iddings while the latter is doing postgraduate work at Wesley Hospital, Chicago.

DR. CHARLES E. BARNETT, Fort Wayne, announces the removal of his office to Office Suite 301, Gauntt Building, corner of West Berry and Webster Streets.

DR. A. P. ROOPE, Columbus, has returned from Florida, where he spent ten days with his family, who have spent the winter in the south.

DR. T. O. ARMFIELD, Elwood, has resigned as secretary of the city board of health, and Dr. T. F. Ginn has been appointed to fill the vacancy.

EAST Chicago is starting a campaign for a new \$100,000 hospital. This city has a population of 30,000, with forty-four industrial plants, and not one hospital.

DR. E. D. EHRLMAN, Rockport, has been appointed secretary of the county board of health to fill the unexpired term of Dr. George DeTar, who removed to Winslow.

NEW Bartholomew County and City Hospital is now under construction, and will be completed by January, 1917. Dunlap & Co. of Columbus, Ind., have the contract.

THE City Health Board of Indianapolis has begun a vigorous campaign to stamp out trachoma in that city, where the disease seems to have made great headway.

THE license of Dr. W. H. Dings, Mitchell, formerly of Fort Wayne, has been revoked. He was convicted recently by the federal court on a charge of using the mails to defraud.

DR. ANGUS CAMERON, son of Dr. John F. Cameron of Hamilton, a recent medical graduate, left Saturday to assume duties as intern at the Children's Hospital in Chicago.

DR. WILLIAM T. GOTT, Crawfordsville, has been reappointed by Governor Ralston as a member of the State Board of Medical Registration and Examination for another four years.

THE forty-first annual meeting of the American Academy of Medicine will be held at Hotel Statler, Detroit, June 9 to 12, inclusive. The program offers some very interesting features.

DR. AND MRS. J. W. STEWART, Logansport, have returned from an extended visit in Florida and Georgia in the interest of Dr. Stewart's health. He reports his health much improved.

DR. FLOYD M. CRANDALL, New York, has been appointed secretary of the Medical Society of the State of New York to fill the vacancy caused by the death of Dr. Wisner R. Townsend.

COMMISSIONERS of Sullivan County have signed bonds for \$30,000 for the purchase of a site and erection of a new county hospital at Sullivan. Petition for this hospital was filed several months ago.

WALTER A. THOMPSON and F. D. Waschka, chiropractors of Marion, were arrested April 15, on bench warrants alleging unlawful practice of medicine, surgery and obstetrics. Each gave bond for \$300.

DR. FELIX B. ROBINSON died at his home in Coldwater, Mich., April 3, from paralysis, aged 73 years. He was for many years a practicing physician at Monticello, Ind., and the funeral was held at that place.

CHARLES W. FAIRBANKS has been reelected president of the Methodist Hospital at Indianapolis. Dr. Joshua Stansfield also was reelected secretary, and Dr. C. S. Woods reappointed superintendent of the hospital.

DR. J. S. HICKMAN, for some time associated with the Provident Hospital and Dr. C. E. Caylor at Pennville, has accepted a position with the Studebaker Hospital at South Bend, and moved there the middle of April.

THE women of Kendallville gave a shower of pillows, pillow cases, sheets, blankets, bed spreads, towels, napkins, wash cloths, trays, hot-water bottles, ice caps, muslin, gauze, etc., for the new Lakeside Hospital, March 30.

WITH the April issue, the *Military Surgeon* is enlarged and improved in general appearance. This change is made because of the expansion of military and naval forces, and the general present-day interest in greater preparedness for defense.

DR. HERMAN DUEMLING, chief surgeon of Lutheran Hospital, Fort Wayne, has donated and erected in the hospital grounds a monument carried out in solid granite, modeled after a painting "Christ, the Great Physician," by a German artist.

DR. G. W. H. KEMPER, Muncie, is attending the General Conference of the Methodist Episcopal Church which convenes at Saratoga Springs, N. Y. Dr. Kemper was honored by being appointed lay delegate from North Indiana Conference.

INSTEAD of having ten city physicians at small salaries supplemental to private practice. Buffalo is to have four all-time city physicians with salaries at \$1,800 per year. The appointments as made were provisional pending the establishment of a civil service list.

BECAUSE of inability to get action on the part of the county council for the erection of a county tuberculosis hospital, Lake County physicians are discussing the plan of forming a stock company and erecting a private institution for the care of tuberculous patients.

DR. H. H. MITCHELL, formerly of Boston, has been employed by the State Board of Health as epidemiologist. He will study epidemic conditions in Indiana, gather statistics concerning them, and handle the fights that are made against them. Dr. Mitchell is a graduate of the Harvard School of Hygiene.

THE monthly report of the State Board of Health for March showed that the total deaths reported in the state for the month were 3,603, at a state death rate of 12.4, while the total births recorded were 5,416, at a state rate of 22.3. Of the births, 2,919 were boys and 2,497 girls. The death rate in the cities exceeded that in rural districts. In the cities the rate was 16.2 and in rural districts, 13.9. The rate in Indianapolis was 19.2.

DR. WILSON G. SIMILLIE, Cambridge, Mass., has been awarded the Boylston Medical Prize for 1915, for an essay entitled "Studies of the Streptococcus of Smith." The 1918 prize will be awarded to the best essay on the results of original research in medicine, the subject to be selected by the writer, and the essay must be in the hands of the committee on or before Dec. 31, 1918. The prize is open to the public. Dr. Harold C. Ernst, secretary of the committee, Harvard Medical School, Boston, will be glad to furnish complete information regarding conditions on which prize is awarded.

THE American Red Cross Society has announced that New York state has won first place among the largest states for selling the largest number of Red Cross seals per capita last December. Rhode Island wins first place in states with a population up to 1,250,000. In states with a population from 1,250,000 to 2,400,000, Minnesota wins first place. Formal presentation of banners to each of the first-place winners will take place at the annual meeting

of the National Association for the Study and Prevention of Tuberculosis to be held at Washington, D. C., May 11 and 12.

A SCHEME for the sale in Chicago of fake medical degrees was brought to light recently by the arrest, on complaint of Dr. Adcock, secretary of the Missouri State Board of Health, of a candidate for license to practice medicine in Missouri. This candidate possessed a diploma supposedly issued by Marquette University School of Medicine, Milwaukee, Wis., bestowing on him the degree of M.D. Investigation disclosed the fact that he had received the diploma from men in Chicago who had represented that they were members of the University, and that he had paid the sum of \$550 for the diploma.

A SMALL fire with explosion of gases occurred April 21 on the top floor of one of the buildings of the Abbott laboratories. Newspaper reports of the extent and character of this accident were grossly exaggerated. The damage was very small, consisting mainly of broken window panes and cracking of temporary partitions. The plant and machinery were injured but slightly, and the entire force went to work the next morning as usual. The Abbott laboratories have issued a statement positively denying the newspaper reports that this firm is or has been engaged in the manufacture of ammunition or explosives.

REALIZING the importance of the teeth and mouth infections to systemic disease, the faculty of the Columbia University College of Physicians and Surgeons have unanimously voted in favor of the establishment of a dental department to be connected with the medical school. A committee of prominent dentists of the city of New York have presented plans which have been approved. The School of Dentistry will be closely associated with the medical school, and the admission requirements will be the same as the medical. The course will be four years, the first two years the same as those in medicine, thus giving the dental student a thorough knowledge of the fundamental sciences necessary to the practice of a specialty of medicine.

DR. A. F. SHEPHERD, who for over twenty years was connected with the state institutions for the treatment of the insane in Ohio, has retired from the public service and in the future will devote his entire time to the management of his sanatorium, "Orchard Springs," located near Dayton, Ohio. For five years prior to his

retirement, Dr. Shepherd was alienist member of the Ohio State Board of Administration, which has complete supervision over the twenty state institutions in which are treated Ohio's 25,000 insane and defective citizens. He has recently enlarged his sanatorium and installed modern equipment for the treatment of nervous and mental diseases, alcoholism and drug addictions. Dr. J. C. George, formerly superintendent of Miami Valley Hospital, Dayton, is associated with Dr. Shepherd in the management of Orchard Springs, as resident superintendent.

CORRESPONDENCE

LIFE INSURANCE EXAMINATIONS

INDIANAPOLIS, IND.

April 21, 1916.

Editor the Journal:—I wish to commend highly your very well-timed and just editorial in the issue of April 15, 1916, headed "The Equitable Stings its Medical Examiners." It is a well established fact that this great insurance company permits its agents to trade in the cheapest and meanest way possible the local examiners' positions for the sake of acquiring a little additional insurance, or from personal favoritism.

It has been known in Indianapolis for many years that no examiner could hold his position who sought impartially, without reference to the agent, to make a scrupulously careful report to the Chief Medical Examiner. I only say this because I believe that it is wrong to the policy holders of any insurance company not to guard their interests by conscientiously conducting on a high plane the matter of medical examinations. Our state and national laws have undertaken to regulate certain abuses in our large insurance companies, but this is one of the most flagrant which probably cannot be touched by legislation, but should be corrected, if possible, to conserve the interests of the insuring public.

Very truly yours,

_____, M.D.

A LETTER TO THE EQUITABLE

COATESVILLE, IND.,

April 24, 1916.

About a year ago I made two examinations for the Equitable, going out into the country to make one of them. In due time I received a

check for \$6 in payment. I returned the check with the statement that I would not make examinations for anything less than \$5. The check was sent back to me, and I forwarded my resignation as local examiner. Dr. Foxworthy then endeavored to secure a colleague to act as local examiner, but failed. He then begged me to remain as examiner, and agreed to allow \$5 for each examination. I consented to this arrangement.

On the 28th of February I made application for a policy in the Equitable, and it was accepted and I received the policy. A few days later one of my colleagues received a letter from Dr. Foxworthy in which it was stated that I had become addicted to the alcohol habit to such an extent as to destroy my efficiency as an examiner for the Equitable, or words to that effect. I considered that this was a scheme on the part of Foxworthy to get an examiner who would make examinations for \$3, inasmuch as his charge against me was absolutely false and malicious. My confrere—who had examined me for the Equitable insurance policy, and who was paid \$3 for the service rendered—answered that so far as he knew I was a total abstainer, and he refused to act as local examiner for the Equitable, stating that he did not care to have anything to do with a company that only paid its examiners three-fifths of the regular established fee.

Immediately thereafter I returned the Equitable policy and demanded its cancellation and the return of my premium. I waited three weeks without a reply, and sent another letter to the Indianapolis office threatening to write the home office, and stating that if that did not bring a reply I would employ an attorney to look after my interests. That letter brought about the cancellation of my policy and a return of my premium.

It is quite possible that my experience is similar to that of other examiners, and I have been wondering how long the medical examiners of the Equitable are going to stand for such treatment.

Following the receipt of THE JOURNAL containing an editorial concerning the Equitable I wrote a letter to the Equitable, which, without personal references, is as follows:

COATESVILLE, IND., April 22, 1916.

The Equitable Life Assurance Society of the United States, 165 Broadway, New York.

Gentlemen:—I desire to call your attention to the leading editorial in the current issue of THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION with reference to the activities of your medical referee in Indiana.

This article suggests that but little can be accomplished by the individual effort of a physician, but I propose to try to do a little missionary work at my own expense, and if I fail no one will be to blame but myself.

In the first place, I intend to communicate or see personally every medical examiner for the Equitable in Hendricks and Putnam counties; and I shall use my influence to induce each one of them to refuse to make an examination for your company for \$3. If you are still successful in securing the services of reputable physicians from the county medical societies to do the work for this fee, I propose to take the matter before the Indiana State Medical Association at its next session and see if there is not some way of heading you off. . . .

Further, I still have a claim against you, amounting to \$4, due and unpaid, for two examinations. I shall not relinquish this claim until it is paid. I have no desire to do any work of any description for you now or in the future, and I can afford to be absolutely independent; and since I have a personal grievance against your medical referee on account of the unjust and shabby treatment he has accorded me, I shall make every effort possible to collect this insignificant amount, even if it costs me ten times the amount to do so. . . .

Yours truly,

C. F. HOPE, M.D.

SOCIETY PROCEEDINGS

TWELFTH DISTRICT

The spring meeting of the Twelfth District Medical Society was held at the Anthony Hotel, Fort Wayne, April 12.

Meeting was called to order at 10:30 a. m., and Kennon Dunham of Cincinnati presented a paper on "The Lung and Some of Its Diseases," with illustrations.

Luncheon was served at 12 m. in the main dining room, and the afternoon session was called to order at 1:30 o'clock, followed by election of officers, as follows: President, J. S. Boyers, Decatur; vice president, William F. Shumaker, Butler; secretary-treasurer, Miles F. Porter, Jr., Fort Wayne. During the afternoon papers were read by Drs. Willard C. Stoner, Cleveland; Kellogg Speed, Chicago, and J. Walter Vaughan, Detroit, on "Symptomatology and Treatment of Arteriosclerosis," "Radical Shaft Excision vs. Conservative Treatment in Osteomyelitis of the Long Bones," with illustrations, and "Blood Changes in Malignant Diseases."

THIRTEENTH DISTRICT MEDICAL SOCIETY

The twenty-third semiannual meeting of the Thirteenth District Medical Society was called to order by President E. E. Parker at the Oliver Hotel, South Bend, April 26, 1916.

The regular program was taken up as follows:

1. "Some Considerations Regarding the Preparation and After-Treatment of Surgical Cases," J. C. Fleming, Elkhart.

Discussed by Drs. Stoltz, Terry, H. M. Miller, Berteling and Barwick.

2. "Impetigo Contagiosa," J. W. Edison, Plymouth.

Discussed by Drs. Shanklin, Hoover, Hopper and Osborne.

After intermission the following resolutions were adopted:

WHEREAS, The past year has seen the departure by death of Dr. T. J. Shackelford of Warsaw, a former president of this society and Dr. W. S. Shafer of Rochester, who served us in the past as vice president, both of whom were for many years active members of this association; therefore be it

Resolved, That we, the members of the Thirteenth District Medical Society, bowing in submission to Almighty God, express our appreciation of their work as physicians and citizens. We feel that the profession and the state have suffered a distinct loss in their demise; be it further

Resolved, That a copy of these resolutions be spread on the minutes of this society and copies furnished by our secretary to their bereaved families.

J. A. WORK, SR.,
H. P. PRESTON,
C. C. DuBois.

Each member was supplied with blank paper on which to put an unsigned statement as to just what he would like the society to be and to do.

On motion of Dr. Fleming, the next place of meeting was left in the hands of the officers.

Dr. Osborne of LaPorte extended an invitation to the members to be present at the Tenth District Medical Society meeting May 16.

A letter was read from Dr. Keiper, President of the State Society, in which he expressed his regret at being unable to be present and made several suggestions for the good of the society.

3. "The Roentgen Ray as a Therapeutic Agent," S. A. Clark, South Bend.

Discussed by C. W. Haywood, Elkhart.

4. "Heat and Infant Mortality," C. C. DuBois, Warsaw.

Discussed by Snapp and Slonaker.

Following the scientific program was a banquet at the Oliver Hotel, after which Mr. Schlick gave an interesting talk on the "Workman's Compensation Law of Indiana," after which there were exceptionally good musical numbers, both vocal and instrumental.

With a vote of thanks to the St. Joseph County Medical Society for the enjoyable evening's entertainment, the society adjourned.

C. N. HOWARD, Secretary.

UNION DISTRICT

The Union District Medical Society, consisting of Fayette, Rush, Union, and Wayne counties, Indiana, and Butler and Preble counties, Ohio, held their Centennial Meeting (the ninety-fifth semi-annual meeting) at Liberty, Ind., April 27, 1916, with President Garrett Pigman presiding.

The following scientific program was carried out: "Herpes Zoster," by P. M. Sater, Hamilton, discussion led by L. D. Dillman, Connorsville; "Records of Errors and Freaks in a Thousand Cases of Appendicitis," J. C. Sexton, Rushville, discussion led by E. D. Clark, Indianapolis; "Remarks on Surgical

Relief in Certain Cases of Constipation with Associated Chronic Invalidism, C. A. L. Reed, Cincinnati, discussion led by W. D. Haines, Cincinnati; "Blood Pressure," C. S. Bond, Richmond, discussion led by Charles P. Emerson, Indianapolis; "A Safe, Simple and Effective Management of Placenta Praevia," William Gillespie, Cincinnati, discussion led by G. D. Lummis, Middletown.

The meeting was called to order at 10 a. m., and adjourned for dinner at the Corrington Hotel at 12:30.

THE MUNCIE ACADEMY OF MEDICINE

Meeting of March 24

B. R. Kirklin read a highly scientific paper on "Embryology," frequently giving Joseph DeLee credit for facts advanced. The following, representing the least erudite parts of Dr. Kirklin's paper, was gleaned by the secretary: In first weeks of life ovum is firmly embedded in the uterine wall; then, owing to rapid growth of villi and their loose attachment to dilated, newly formed blood vessels, it is possible easily to lift ovum out of its bed. From the mesoblastic layer of ovum, connective tissue brought by the allantois and carrying fetal blood vessels, presses into irregular ingrowths of trophoblast and thus the first villi are formed. Growth of ovum is favored by thickening of hyperplasia of mucous membrane, which is soon bulged outward toward the cavum uteri in the form of a hemisphere. The glands are separated from each other and arrange themselves tangentially to the growing ovum. The layer of mucous membrane that is pushed up in the form of a cover is called the decidua capsularis; that portion on which the ovum rests, the decidua basalis, and all the rest of the lining of the uterus, the decidua vera. At end of third month decidua vera has reached its greatest development. The decidua basalis or serotina is a portion of the decidua vera altered only by the superimposed growing ovum. The decidua reflexa, or capsularis, is that portion of vera which is stretched over ovum. As ovum grows and fills out cavity of uterus the deciduae undergo many and material changes. Uterine cavity is completely obliterated by fourth month. The reflexa undergoes coagulation necrosis, and is absorbed at sixth month, though occasionally portions of it can be found on membranes at term. The circulation of mother and fetus are distinct and do not intermingle. The blood of the child circulates inside the villus; the blood of the mother circulates outside, around the villus. In syphilitic cases the placenta is heavier than in normal children of the same size. The causes of particular insertions of the placenta are unknown. Endometritis and subinvolution certainly have something to do with the location of the placenta low in the uterus. The spiral twists in cord, of which there may be several hundred, are best explained by movements of child, but direction of growth of arteries, and effect of pumping action of fetal heart, may be partly causative. Fluid around child has most important functions: First, it is a food, which fetus drinks. This is proved by the finding of lanugo in meconium after birth, and real swallowing motions have been determined in fetus during latter months of pregnancy. It is a water-cushion taking up shocks from external injury, and prevents amnion from adhering to fetus and causing deformities. During labor it

helps dilate the passage by forming a fluid wedge with the membranes and, surrounding fetus completely, it distributes, as all fluids do, the compression exerted by the contracting uterus. It washes out vagina for passage of child, and by its slightly bactericidal action, prevents infections of child and uterine cavity.

Meeting of March 31, 1916

Regular meeting of Muncie Academy of Medicine was held in Y. M. C. A. Building Friday evening, March 31.

W. J. Molloy read a paper on "Anesthesia in Obstetrics," saying: The reason for employing chloroform for a short period of time only is the visceral degenerative changes it produces. It is a drug which is not without danger to mother and child. While ether is a safer anesthesia in obstetrics than chloroform, it has not proved ideal. It produces a diminution of uterine contractions which predisposes to hemorrhage and also lowers resistance to infection. It is only in recent years that nitrous oxid has taken its place as an anesthetic in obstetrics. Dr. Arthur Guedel of Indianapolis advocated its use in 1911, and reported a series of cases. Since that time many others have advocated its use. The object for its use in obstetrics is not so much for anesthesia as for analgesia. It is pleasant to take, is nonirritating to the respiratory tract, does not lower resistance and does not produce relaxation to a point where there is a danger of postpartum hemorrhage, as does chloroform or ether. Its action is rapid and analgesia can be procured if commenced at the first intimation of pain. I have never used chloroform in obstetrical practice. Ether has been used for several years. For the past eleven months I have used nitrous oxid exclusively for obstetrical work.

In the discussion F. W. Dunn supplemented Dr. Molloy's paper by reference to the so-called "twilight sleep." He has recently tried it on twenty patients with rather satisfactory results. The main objectionable feature confronting the general practitioner is the time and attention demanded by the patient in order to successfully carry out the proper technic.

Dr. Mix spoke very highly of nitrous oxid and cited several illustrations.

B. B. Morrow made a few remarks on pituitrin therapy, giving its indications, its contra-indications and its dangers. It is safe and satisfactory when the way is clear and everything is ready for prompt delivery. It is indicated in postpartum hemorrhage. Subsequent doses do not act with the vigor of original doses.

Adjourned.

Meeting of April 14

W. W. Wadsworth read a paper on "The Physiology of Pregnancy," saying in part: When a matured ovum and a matured spermatozoon fuse, each adds to that union half the normal number of chromosomes, in which the fertilized ovum is a cell with its chromosomes restored to their usual number. A number of spermatozoa may enter the zona radiata, but as soon as one has come in contact with the cytoplasm of the egg a reaction ensues in the surface layer, which makes it impervious to other spermatozoa. The physiology of pregnancy is essentially dual in character and reciprocal in relation. From the moment of conception the interdependence

of maternal and embryonal life increases in its moral and physical potentialities. The removal of the ovaries or even the corpus soon after pregnancy has begun brings the process to an end, while a similar operation later in pregnancy has no apparent effect on the development of the fetus or the subsequent act of parturition, but produces atrophy of the mammary glands. When the ovum becomes implanted in the mucous membrane of the uterus the formation of the decidua and subsequent evolution is dependent on the maternal blood supply. The character of maternal nutrition must largely determine the supply and development of the fetus. Following conception the whole maternal organism undergoes changes in sympathy with and response to the new demands levied on it: the earliest and most marked change takes place in the symmetry, structure and function of the uterus. It is not the uterus only which is involved in pregnancy, but the entire female organism as well. The lymph vessels converge in a plexus beneath the peritoneum. This fact is alone sufficient to account for the rapid absorption of toxic or infectious materials. The female genitalia is capable of producing local, referred, reflected, transferred or sympathetic pains through the sympathetic system. Demonstrations tend to show that the bond of union between the mammary gland and uterus is through the blood and lymph channels. In pregnancy increased food consumption demands corresponding elimination. If the mother must eat for two she should eliminate for two. The subjective state of the pregnant woman is largely a matter of previous education, training and physical preparation. Pregnancy is as essential to the full development of the normal woman physically as the awakened maternal emotions are to her moral nature. The miracle of motherhood is quickening the latent love in the maternal breast, in broadening her mental horizon and giving proper perspective to her position and sense of responsibility in life, finds its physical analogue in bodily changes in symmetry, organic, structural and functional activity. Pregnancy transforms the gay, light-hearted, care-free girl of slender, sinewy form into a sober, sincere, matronly woman, the fulfilment of the divinest law of her being.

Adjourned.

Meeting of April 21

C. M. Mix read a paper on "Ideal Obstetrics," saying: The fact that our board of health reports still show a number of cases of death following labor from infection makes it imperative to practice eternal vigilance in regard to obstetrical asepsis and antiseptics. The uterine cavity during pregnancy is sterile. The vagina normally contains large numbers of bacteria which are, with exception of gonococci, non-pathogenic. The vagina to all practical purposes, then, is sterile at the beginning of labor in the normal pregnant woman. The vulva, on the other hand, abounds in pathogenic bacteria and cocci. It is impossible to render the vulva sterile or completely free from pathogenic bacteria by any methods we have at our command. Thus it is evident if infectious material reaches the placental site it must be either through the blood stream from some distant focus of infection or it must be carried into the vagina by some artificial means, the most usual of which is the ordinary vaginal examinations. In general, it can be said that vaginal examinations should be made as infrequently as is consistent with the amount of

knowledge needful, and when made should be done under the strictest care. Compiling information gained by palpation with the location of the greatest intensity of fetal heart sounds gives us a fair idea of which fetal pole is presenting, and an observation of the periodicity, severity and length of pains helps to determine whether the labor is progressing normally. I think it would be quite safe in many cases to omit the vaginal examination. In my opinion one should use the same aseptic and antiseptic precautions in examining and managing a case of obstetrics that is recognized as necessary in opening the peritoneal cavity. Rubber gloves reduced septicemia from 1.1 to 0.35 per cent. in Sloam's Maternity Hospital. The problem is simply to create and maintain a sterile field of operation.

Several of the nurses from the Mix Hospital were present and gave a demonstration of the preparation of a parturient bed, the care and use of instruments and gloves, the preparation of the patient and physician, and enumerated the furnishing necessary to a first-class obstetrics paraphernalia.

Adjourned.

BARTHOLOMEW COUNTY

Bartholomew County Medical Society met in Bassett building, April 11, at 8:20 p. m., with Dr. J. I. Maris, president, in the chair. Minutes of last meeting read and approved.

A communication was read from the Grant County Medical Society in regard to medical legislation, and was ordered laid over until the June meeting. The application of Dr. W. J. Norton of Hope, Ind. to join the Bartholomew County Medical Society was read; motion by Dr. McCoy and seconded by Dr. Kammon that Dr. Norton be reinstated. Carried.

The applications of Drs. W. T. Carmichael and J. H. Morrison to become members of the medical society were read and referred to the board of censors to report at our May meeting. A communication from the State Laboratory was read, asking for criticism in regard to services rendered, promptness and to the work as a whole. It was the unanimous consent of members present that the State Laboratory was satisfactory.

A report of children's health conference read by Dr. Clouse and action postponed until our next meeting. Dr. Wood read a paper on "Bronchopneumonia," and Dr. Cline read a paper on "Sciatica." Both papers covered the ground thoroughly, and were freely discussed by a number of members present, and, to say the least, was a very profitable, enthusiastic meeting.

The following doctors present: Maris, DeLong, Norton, F. D., Wood, Butler, Carmichael, Marshall, Kamman, Reynolds, Clouse, McCoy, Holder, Cline, Kirkpatrick and Benham. Adjourned to meet May 9.

JAMES W. BENHAM, Secretary.

DELAWARE COUNTY

Meeting of March 3, 1916

Regular meeting of Delaware County Medical Society was held in Muncie Y. M. C. A. Building, Friday evening, March 3 and was called to order at 8:15 by President C. A. Ball.

Applications for membership of Drs. Bernard and Lewis Payton were returned endorsed by Board of Censors and they were voted in by the society.

Dr. H. D. Fair read a paper on "Miscarriage." After defining the word in its relation to the expulsion of either embryo or fetus Dr. Fair grouped the subject under three heads: accidental, criminal and therapeutic. Many women who are more or less regular in their menstruation abort without knowing that they are doing so. I believe many "clots" passed during menstruation are in reality early abortions. Accidental abortions are likely to take place at the time regular menstruation would have occurred, and more frequently at third month than at any other. If abortions have happened early it is probable that they were due to either an endometritis or a uterine displacement. Causes of accidental miscarriage are threefold in their origin and nature: (1) those in which the father is responsible; (2) those having to do with mother, and (3) conditions existing in fetus itself. Fright and strong emotion has had a large share in the blame when considering causes of abortion but I never knew of an abortion resulting from a purely emotional cause. Traumatism belongs in the category of external causes, yet it is remarkable what an amount of traumatic injury a woman may sustain without dislodging the product of conception. On the other hand the slight effort of dancing a number, a slip on the icy pavement, the jar of a rough street car ride, in some women will be sufficient to cause miscarriage. Certain drugs are given credit for being a sure "relief" for the pregnant state. They are lauded as sure "regulators" but every intelligent physician knows that there are no drugs that will certainly produce abortion. Among the internal causes, backward displacement of the uterus stands at the head. When uterus, held under sacrum by adhesions becomes large enough to fill this hollow, something is bound to happen, and most likely thing is miscarriage. Chronic metritis or endometritis or even an extensively lacerated cervix may be responsible for abortion. Fetal conditions causing miscarriage are nearly always pathological, affecting either ovum or its appendages, including placenta. Therapeutic abortion is name applied to emptying of uterus for purpose of conserving life or health of the mother. At one time or another abortion has been justifiably performed for the following reasons: contracted pelvis, malignant growths, later stage of tuberculosis, pernicious vomiting of pregnancy, advanced disease of the kidneys, placenta-praevia with its attendant uncontrollable hemorrhage and an incarcerated retroflexed uterus. One point worth bearing in mind when considering a comparison between dysmenorrhea and early abortion is that normal menstrual blood does not clot. The place for a woman who is about to abort, who is in the process of miscarriage or who has just completed the job, is in bed. When the hemorrhage or pain is severe and little or no dilatation of the cervix, it is good practice to pack the vagina. Ergot given at this time will tend to increase uterine contractions, and is usually indicated. If pains continue, when packing is removed at the end of from eight to twenty-four hours, according to the state of dilatation at the beginning, the complete ovum may be found in the gauze or lying in the vagina. It sometimes happens that the ovum has not been expelled, neither does it present at the os; the cervix will usually be found dilated to the extent that a finger or fingers can be introduced into uterus when the mass can be peeled from its attachment and removed. Understand—I am not advising this

procedure for the careless physician who has his patient in the middle of a soft bed, and who, without precautions of any sort, works in the dark or perhaps under cover. The less *he* does the more fortunate his patient. He is perfectly justified in using the expectant treatment. When an incomplete abortion occurs the remnants may be retained in spite of the packing and all efforts of expulsion on the part of the patient. If ergot be administered under these circumstances we may be instrumental in defeating our own purpose, for the drug will sometimes cause the cervix to contract, compelling a resort to instrumental dilatation. It frequently happens that miscarriage will so stimulate the function of the mammary glands that the breasts will fill with milk. If so, a tightly fitting binder should be applied and the breasts let alone. Applications of belladonna or a solution of atropin are useful in lessening the secretion of milk, as are also the administration of saline cathartics. If breasts become painful, phytolacca is a splendid remedy. The most serious complication I have been called on to treat in recent years is shock due to profound hemorrhage. In my experience the only internal remedies that can be relied on are atropin and adrenalin, followed by intermammary injections of salt solution. Posture and absolute quiet are of greatest importance. I believe strychnin is contraindicated in shock due to hemorrhage.

DR. G. R. ANDREWS: It is a mistake to believe that there will be no elevation of temperature in non-infected cases. If chart is kept it will be found that probably one in five will show a temperature at sometime of over 100 F. This is true of normal deliveries at full term, and in ordinary clean laparotomy. I wish to condemn the spiral curet as a dangerous instrument. Curettement or curettage are wrong terms to use in connection with miscarriage. All we want to do is to remove foreign material and not to disturb the endometrium.

DR. F. W. DUNN: I believe the practitioner in rural districts and without skilled assistance should adopt rather a conservative or expectant plan of treatment. The danger of infection is great.

Adjourned. CLAY A. BALL, President.

Meeting of April 7, 1916

Regular meeting of Delaware County Medical Society was held in Muncie Y. M. C. A. Building Friday evening, April 7, and was called to order at 8:15 by Past President H. A. Cowing.

Dr. M. A. Austin of Anderson read a splendid paper on "The Practice of Medicine," from which the following was abstracted: I think that medical practice is impractical. People's experience with the profession has been such as to make them skeptical of our honesty, even when we try to give them our best service and conscientiously try to make ourselves worthy of our profession. The average patient likes to tell the doctor what the patient thinks is wrong with him; he likes to have the doctor compliment his diagnosis; he wants the doctor to sell him a cure for his disease. I hope that the Lord will be merciful to some of the men who have prescribed tonics by the gallon, whose only efficiency is due to their alcoholic contents; who dope tubercular girls with emmenagogues to bring them around; who treat rheumatism for months and never examine to find out that a flatfoot and Sears, Roebuck shoes are the

cause of the trouble; who take a nervous patient and ignore the signs of exhaustion; who fail to examine into and inquire about unsatisfied sex problems in the majority of neurasthenic women, and who operate on neurasthenics so often that they ought to have bellies made with hooks and eyes or buttons and button holes. The patients who have died from blood letting in the days gone by are probably fewer than the typhoid patients who have died from exhaustion due to starvation, or hemorrhage and perforation induced by milk curds. Is it any wonder that we have chiropractors or faith healers or any other of the parasitical appendages attached to the healing of broken humanity? The art of medicine is greater than the science of its practice, and but few acquire that proficiency in its cultured attainments without the blandishments of the charlatan whose only recommendation is his personality and glad-hand. Medicine is not a practical profession, because the majority of a doctor's patients will not let him be practical and often make him dishonest. It will take more than medical knowledge and skill to solve the serious problems of the relations of the sexes, as they are growing farther and farther apart so far as home life is concerned. But as medical men, what are we to do with these families that expect a doctor to supply them with brains, with internal secretions and substitutes for normal diversions? To be practical in our profession we must empty abnormal minds of unhealthy impressions, counsel early marriages, find suitable husbands and wives for the relief of abnormal congestion of pelvic tissues, counsel divorce in mismatched couples. The more I attend medical society meetings of the average sort, the more I am impressed with the fact that the only real benefit received is by the fellow who is on the program. It is unfortunate that a good doctor can not legitimately advertise himself in other ways than by writing textbook essays. I do not wish to give you the impression that I am belittling the value of all meetings where real papers are read and proper discussion indulged in afterward. I want to compliment the members of the Muncie fraternity who are doing real medical work in their weekly meetings. I wish I lived in Muncie when I see the good things that you have reported so carefully in the *STATE JOURNAL*. Such meetings should be an incentive to every society in the state.

Dr. Hill: If the doctor who depends on the practice of medicine for his living always told his patients the whole truth he would soon starve. Patients will pay well for being told what they wish to hear. Fads serve a useful purpose. I have had some remarkable results in the use of bacterins. I wish Dr. Austin had said more about the financial side of the practice of medicine. I am unable to see why it is less ethical for a physician to buy space in a newspaper in which to tell the public his qualifications and equipment than it is to be so in league with the reporters and city editor that many inches of reading matter containing personal laudation appear from day to day, and the record of whose professional doings are heralded broadcast as news items.

Dr. Kemper refused to take Dr. Austin's paper very seriously and in the discussion said if the physician would be a little more thorough in his diagnosis the profession would command more respect. Dr. Kemper then cited several instances where a little more care and time would have saved physicians embarrassment.

Adjourned.

H. D. FAIR, Secretary.

HANCOCK COUNTY

Hancock County Medical Society met in Greenfield Thursday, April 3, and called to order by President E. A. Hawk.

Minutes of previous meeting were read and approved.

The paper of the evening, "The Safe Management of Thyroid Disease," was read by Dr. Goethe Link of Indianapolis, which was very instructive and greatly appreciated. The paper was generally discussed.

Action taken that all persons presenting papers before this society shall furnish a copy of same for filing with secretary for future reference.

The membership of this society consists of twenty-one active members, one associate member and one honorary.

Refreshments were served.

Adjourned.

JOSEPH L. ALLEN, Secretary.

ST. JOSEPH COUNTY MEDICAL SOCIETY

WHEREAS, It has pleased Almighty God in his infinite wisdom to call to his reward his servant, Benjamin F. Shively, Senator of the United States of America; Therefore be it

Resolved, That the St. Joseph County Medical Society of the State of Indiana, mourns not only the loss of a distinguished citizen, but of a genuine friend of the medical profession, both locally and nationally, in that he at all times lent his aid in the advancement of medical science to the end that human suffering might be alleviated.

Resolved, That the St. Joseph County Medical Society extends to the wife and family its deepest sympathy in their great bereavement, in the hope that the memory of the faithful services rendered his country in trying moments by an efficient statesman, may be partial compensation for an otherwise insoluble loss.

Resolved, That a copy of these resolutions be sent to the family of the deceased, to the daily papers of South Bend, Ind., and to the official JOURNAL of the Indiana State Medical Society, and that a copy be spread on the minutes of the St. Joseph County Medical Society.

HUGH MILLER,
J. B. BERTELING,
CHARLES STOLTZ,
Committee.

SULLIVAN COUNTY

The Sullivan County Medical Society met in Shelburn, April 5, at home of Dr. J. B. Maple, with Dr. J. T. Oliphant in chair.

Minutes of previous meeting approved as published.

Dr. George H. Hunt, Paris, read a paper entitled "Recent Theories in Regard to Diabetes." A digest of the same follows:

Prior to 1848 diabetes was regarded as a disease of the kidneys. In 1848 Claude Bernard declared it to be due to disease of the nervous system. Today we believe primary fault does not lie with kidneys, but we are not sure that the disease is not one of nervous system, nor are we sure that the kidney adnexa are not

primarily responsible. Pancreatic diabetes is the only form of importance to general practitioner. Disordered pancreatic function is principal cause of diabetes, lack of internal secretion of pancreas being a constant factor. Ductless glands seem to play a very important part in production of diabetes. There is considerable uncertainty as to how the diminution of the secretion of pancreas causes diabetes. Whether it is due to an overstimulation of sugar releasing function of liver or to failure of secretions of pancreas to cause the sugar in the blood to be burned is a matter of dispute. The sugar manifestations in diabetes is not the disease itself, but a symptom. It is a disease of over-acidity or one of underalkalinity. It is the severest manifestation of acidosis known to medicine. The danger of the disease is the acidosis. For treatment, eliminate to the utmost, restore the function of the pancreas, restore the normal intestinal digestion, render blood and tissues alkaline. Diet lists must be specific and rigidly adhered to. Colon must be kept clean. Bicarbonate of soda in pills or capsules that will pass the stomach into the intestines should be used. High enemata of soda may be employed or it may be introduced directly into the blood stream. Organotherapy has its advocates, but the writer has seen no good results. Surgical violence often produces marked improvement, and surgical operations in cases of diabetes are not contraindicated. The writer believes that dietetics, drugs, enzymes, organic extracts, etc., have their place and time in the treatment, but that time is while the pancreas, through the islands of Langerhans, is capable of regulating the sugar content of the blood. When the islands of Langerhans become sclerosed, emulsified or subjected to fat degeneration, the writer believes that the treatment, medical or otherwise, is no more capable of restoring the islands and their function than it would be capable of restoring an amputated limb. In serious degeneration of the islands death may become a matter of prolonged time, but it is inevitable in every instance.

Paper generally discussed.

Dr. W. N. Thompson, Sullivan, read a paper entitled "The Physician's Duty to the Community."

There being no further business, the society adjourned to social session, where they were entertained by the host.

Visitor present, Dr. George H. Hunt, Paris, Ill.

Members present: Drs. Oliphant, O'Dell, Vancleave, Whipps, Bailey, Crowder, Scott, Corbin, Higbee, Freeman, Thompson, Briggs, Neff, Barco, J. M. Billman, George Billman, Stewart, Lindley, Robards, Nellans and Maple.

J. B. MAPLE, Secretary.

VIGO COUNTY MEDICAL SOCIETY

Meeting of March 7

Meeting was called to order by the president, Dr. Charles Wyeth.

A paper by Dr. L. P. Luckett, "Conservation of Mothers," was read. This paper, which was very interesting and instructive, went very thoroughly into the detail in management both during and after confinement, and also into the pathology, diagnosis and treatment of other conditions not connected with maternity cases. The etiology of diseases peculiar to the generative organs of women were taken up, also their hygiene before, during, and after pregnancy.

The manner of dealing with lacerated perineums, puerperal sepsis, abortions and gonorrheal infections of these organs were dealt with at length. The paper created quite a bit of discussion by Drs. Knoefel, Woodward, Weinstein, Jett, C. N. Combs and M. R. Combs. Seventeen were present.

Adjourned.

Meeting of March 14

Called to order by the vice president, Dr. H. C. Cook.

PROGRAM

A paper by Dr. E. L. Mattox, "Pneumonia in Children," was read. This paper was timely, full of good suggestions, practical and to the point. The writer laid quite a bit of stress on the rôle pertussis played as a contributory factor in pneumonia in children and of its relief by the use of pertussis vaccine, the acute exanthematous diseases of children being responsible for most of the pneumonias in children in his experience.

Twelve were present. The paper was discussed by Drs. Caffee, Jett, Woodward, Forsyth and Bethea. Adjourned.

Meeting of March 21

A paper by Dr. J. P. Worrell, "Reflex Manifestations of Eyestrain," was read. Dr. Worrell described the eye as a camera and the deviation from the normal length of the eyeball, called hypermetropia, when the eyeball was so short that the rays of light were focused behind the retina, and myopia when the rays of light were focused in front of the retina, the term astigmatism meaning an unequal curvature of the cornea in any meridian. He stated that in his experience the mild degrees of error caused more reflex troubles than those of great error, because the muscles of accommodation in trying to overcome the error were in a constant state of contraction and where the error was great, the muscles did not try so much to correct the error. Slight errors being more difficult to correct, would cause reflex troubles that would be hard to believe came from the eyes. Pelvic diseases were sometimes caused by eyestrain, and in his opinion every serious pelvic disorder should have a thorough ophthalmic examination. Headaches, vertigo, nausea (especially so-called sick headaches), called for an examination of or refraction of the eye. In referring to opticians, he said they were only mechanics and not physicians and were presuming to practice medicine by examining for errors of refraction, also that their mechanical apparatus were not reliable and no true examination of the eye could be made without the use of a mydriatic. Discussed by Drs. Bethea, Kutch, McAllister and Danner.

Nineteen were present.

Adjourned.

Meeting of March 28

A paper by Dr. D. W. Hebble, "Noncalculus Colicystitis," was read. This paper had special reference to two very interesting cases occurring recently in his practice. One in which the attack (in a woman), came on with symptoms similar to influenza, with fever, chilliness, aching of the muscles and joints, within a few days followed by a distinct swelling in the right hypochondriac region, which simulated a suppurative appendicitis or tuboovarian abscess. On operation found an empyema of the gallbladder. The patient made an uneventful recovery. The second

case was in a young man previously healthy, that an attack came on suddenly in the night, with subnormal temperature, rapid pulse, severe pain over the gallbladder, and all symptoms of shock, the patient saying he felt as if something had broken inside him. An immediate operation revealed a ruptured gallbladder. Removal of gallbladder with uneventful recovery. These two cases bearing out the modern idea that colicystitis or any trouble with the gallbladder (except benign or malignant tumors), is an infection, and that gallstones are probably more often formed without severe infection, especially if the bile becomes lessened in alkalinity. In the great majority of cases (chronic ones) most of the symptoms are referable to the stomach. Jaundice is a very uncertain symptom.

Diagnosis: Roentgen-ray is unreliable.

Treatment: Palliative in the beginning by giving 1 pint of hot water by mouth, followed by calomel and salines freely to open the bowels and help remove congestion in these parts. External heat either wet or dry over the liver. Surgery is really the only successful treatment.

Complications: First, are adhesions; second, pancreatic.

The paper was freely discussed by Drs. Kutch, Forsyth, Caffee, Pierce, M. R. Combs, Yung, Bethea, Woodward, Casebeer, Jett, McAllister and Fink, the majority agreeing that gallbladder cases were surgical from the very beginning.

It was moved, seconded and carried that a committee be appointed to confer with the nurses in regard to the Vigo County Visiting Nurses' Association. Drs. Charles Wyeth, M. R. Combs and O. E. Fink were appointed.

Miss Kiddcr and Miss ——— visited the society as representatives of the nurses' association.

Dr. Jumper, a practicing physician from Mexico, was present as a guest and gave a short talk on "Medical Conditions in Mexico," laying stress on the fact that sepsis in wounds was not nearly so frequent or dangerous in Mexico as in the United States on account, he thought, of the dryness of the air. Medicine is handicapped in Mexico on account of the filth of the natives.

Nineteen were present.

Adjourned.

O. E. FINK, Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since the publication of New and Nonofficial Remedies, 1916, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

STYRACOL TABLETS, 5 GRAINS.—Each tablet contains 5 grains styracol. Merck and Co., New York.

TANNALBIN TABLETS, 5 GRAINS.—Each tablet contains 5 grains tannalbin. Merck and Co., New York.

STANOLIND LIQUID PARAFFIN.—A non-proprietary brand of liquid petrolatum, complying with the standards of the U. S. P., 8th ed., and made from American petroleum. Standard Oil Company of Indiana, Chicago (*Jour. A. M. A.*, April 1, 1916, p. 1027).

PROPAGANDA FOR REFORM

DIARSENOL.—Dr. E. H. Martin, Hot Springs, Ark., reports that, after giving several hundred doses of Diarsenol without any bad effects whatever, he had two cases in which nausea, vomiting and symptoms of apparent collapse such as have been previously reported by another writer. He found on investigation that the specimens which in his hands gave untoward results as well as those previously reported on and two further accidents were all due to a product bearing the same lot number (*Jour. A. M. A.*, April 8, 1916, p. 1155).

PRESCRIBING OF NARCOTICS.—The Harrison Anti-narcotic law exempts from its operations ready-made mixtures containing specified small quantities of narcotics, but requires physicians' prescriptions containing small amounts of narcotics to be registered. The law should be made consistent by requiring the registration of all prescriptions containing narcotics in any amount. The inconsistency in the law should be removed by prohibiting absolutely the sale, except on a physician's prescription, of preparations containing narcotics in any proportion. The continued uses of small doses of a narcotic drug is just as capable of establishing the habit as is the use of larger doses (*Jour. A. M. A.*, April 8, 1916, p. 1156).

PIPERAZIN, LYSIDIN, LITHIUM CARBONATE, SODIUM BICARBONATE AND SODIUM CITRATE AS URIC ACID SOLVENTS.—H. D. Haskins has studied the uric acid solvent power of urine of persons taking the various substances classed as uric acid solvents. The investigation lead to the following conclusions: 1. Piperazin can cause the urine to dissolve more uric acid than it would without the drug, and this effect is most marked if sodium citrate or bicarbonate be also given and if diuresis be avoided. 2. Lysidin can act as a uric acid solvent but is not a practical therapeutic agent because of the large doses required. 3. Lithium carbonate is a uric acid solvent if large enough doses are used, but is unsafe and possesses no advantage over sodium citrate or bicarbonate. 4. Sodium citrate and bicarbonate are reliable and satisfactory uric acid dissolving agents when given in such dosage as to keep the urine alkaline (*The Arch. Int. Med.*, March, 15, 1916, p. 405).

EMETIC ACTION OF STROPHANTHUS NOT DUE TO OIL.—Hatcher and Eggleston have shown that the digitalis bodies produce nausea and vomiting through action on the medulla and that the direct action on the mucous membrane of the stomach is unimportant. They demonstrated that the fixed oil (fat) of digitalis produced no action and conclude therefore that attempts to avoid the emetic action of digitalis by removal of oil from digitalis preparations is of no avail. Similarly Hatcher has recently determined that the oil contained in strophanthus is not the cause of the nausea sometimes produced by this drug. While removal of the oil renders tincture of strophanthus more "elegant" pharmaceutically, such removal is of no therapeutic importance (*Jour. A. M. A.*, April 15, 1916, p. 1199).

A MUCH NEEDED PHARMACOLOGIC INVESTIGATION.—J. D. Pilcher, University of Nebraska, College of Medicine, has investigated the action on the uterus of the guinea-pig of a number of drugs which are widely used as ingredients of proprietary "female remedies," and which so far have been little, or not at all, studied. Blue cohosh (*Caulophyllum thalictroides*) showed a variable tonic effect. Pulsatilla (*Anemone pulsatilla* or *Pulsatilla pratensis*), unicorn root (*Alettris farinosa*), figwort (*Scrophularia marylandica*), valerian (*Valeriana officinalis*) and skullcap

(*Scutellaria lateriflora*) were more or less depressant. The following drugs gave negative results: cramp bark (*Viburnum opulus*), black haw (*Viburnum prunifolium*), swamp maple (*Acer spicatum*), false unicorn (*Chamaelirium luteum* or *He lonias dioica*), liferoot (*Senecio aureus*), wild yam (*Dioscorea villosa*), motherwort (*Leonurus cardiaca*), passion flower (*Passiflora incarnata*) and squaw vine (*Mitchella repens*). It is to be hoped that Pilcher's work will permit the formation of an opinion as to the therapeutic value of those drugs in which some degree of activity has been found (*Jour. A. M. A.*, April 15, 1916, p. 1205).

WHY GLYCEROPHOSPHATES?—The glycerophosphates are split up in the intestines into ordinary phosphates and absorbed and utilized, if they are utilized at all. There is no evidence that glycerophosphates have any pharmacologic action to warrant the belief that they are of use as therapeutic agents. The belief in their value is kept alive by the promotion of certain proprietary mixtures. The glycerophosphates will be continued to be manufactured until physicians refuse to prescribe them. A manufacturer has even substituted glycerophosphates for the potent yellow phosphorus in his elixir of phosphorus, nux vomica and damiana and, so his chemist reports, physicians continue to prescribe the proprietary the composition of which has been altered (*Jour. A. M. A.*, April 15, 1916, p. 1205).

ELIXIR CALCYLATES COMPOUND.—Each dessertspoonful of this specialty is said to contain the "equivalent of" Calcyates (calcium and strontium di-salicylate) 5 grains, resin of guaiac $\frac{1}{2}$ grain, powdered digitalis leaves $\frac{1}{4}$ grain, powdered squill $\frac{1}{4}$ grain, extract of colchicum seed $\frac{1}{4}$ grain, cascarn $\frac{1}{16}$ grain, aromatics. One or two dessertspoonfuls are to be taken three or four times a day. The mixture is to be given in cases of "rheumatism, lumbago, neuralgia, sciatica, etc." If a salicylate is indicated it should be given in sufficient amount in the form of sodium salicylate; the patient should not be given a preparation containing ingredients in the way of guaiac, squill and colchicum which are not needed. Digitalis is rarely indicated in inflammatory rheumatism and it should never be given in a multiple mixture (*Jour. A. M. A.*, April 22, 1916, p. 1307).

EMETIN HYDROCHLORID VARIABLE.—It should not be taken for granted that because a drug bears the name of a definite compound it is true to name and pure, and therefore trustworthy in its action. This fact has recently been demonstrated in regard to emetin hydrochlorid. Two cases in which the administration of emetin hydrochlorid produced symptoms of poisoning (one terminating fatally) at the Johns Hopkins Medical Clinic led to an investigation by R. L. Levy and L. G. Rowntree, in which the emetin hydrochlorid preparations of five pharmaceutical houses were used. This investigation led to the conclusion that the products supplied as emetin hydrochlorid are variable in composition and in toxicity to a degree which constitutes a serious danger. It behooves physicians to insist on some declaration from the firm supplying emetin hydrochlorid as to its purity and as to the standard employed. Levy and Rowntree emphasize also the fact that emetin hydrochlorid medication itself is not an innocuous procedure. To avoid the toxic effects of emetin, the dosage should be carefully adjusted for each individual and the treatment should be given in courses at intervals of several days or a week. The subcutaneous method of administration is to be preferred (*The Arch. Int. Med.*, March 15, 1916, p. 420).

BOOK REVIEWS

GENERAL MEDICINE. Volume I of the Practical Medicine Series for 1916. Edited by Frank Billings, M.S., M.D., Head of the Medical Department and Dean of the Faculty of Rush Medical College, Chicago. Price, \$1.50. Price of the series of ten volumes, \$10. The Year Book Publishers, Chicago.

Billings reviews in this volume as thoroughly as his allotted space permits him the infectious diseases, diseases of the chest, of the heart, of the blood vessels, of the blood and blood-forming organs, of the ductless glands and of the kidneys. Diabetes mellitus, gout and carbon monoxid poisoning are also considered.

Considerable attention is given to the review of tuberculosis. Evidently this disease continues to claim the usual great amount of interest that it has for the past few years.

THE MEDICAL CLINICS OF CHICAGO. Volume 1, No. 5, (March, 1916). Octavo of 220 pages, 67 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Published bi-monthly. Price per year: Paper, \$8; cloth, \$12.

This issue starts out with a clinic by Dr. James T. Case on roentgenologic aspects of intestinal stasis. The forty pages devoted to this clinic are full of information on this important subject which is of real practical value to the general physician.

Abt's clinic on congenital syphilis contains so much in so little that one can get practically all the knowledge he desires or needs from this clinical talk.

The other clinics are up to the excellent standard already set in the preceding issues.

It is not only surprising but annoying to find some of the Chicago internists saying "tubercular" when they should say "tuberculous." Is it carelessness or is it otherwise?

THE ENDEMIC DISEASES OF THE SOUTHERN STATES. By William H. Deaderick, M.D., and Lloyd Thompson, M.D., of Hot Springs, Ark. Octavo volume of 546 pages with 117 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Cloth \$5 net; Half Morocco \$6.50 net.

The authors present an intensive and exhaustive study of the diseases endemic in our Southern states. The diseases included are malaria, blackwater fever, pellagra, amebic dysentery, hookworm infection, and infections with other intestinal parasites.

The authors are cautious enough to make it quite clear that these diseases are not confined strictly to the Southland but that most of them are disseminated throughout this country. There is no doubt, however, about them being more prevalent in the South.

The large number of splendid illustrations is an especially commendable feature. Neither the authors nor the publishers seem to have spared any effort to make this a book of such a high grade of excellence that it ought to meet with popular appreciation and favor.

STUDIES IN ETHICS FOR NURSES. By Charlotte A. Aikens, Author of Hospital Management, Primary Studies for Nurses and Clinical Studies for Nurses, etc. 12mo of 320 pages. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, \$1.75 net.

This well-known writer of books for nurses presents a new work that should be appreciated by nurses as much and more than any of the preceding works.

This book is concerned with the nurse herself. It is divided into three sections. The first deals with

the nurse in relation to herself; the second with the nurse in relation to the hospital and its work; the third with the nurse after her graduation. We know of no one who is more qualified or better able to give nurses the advice on ethics they ought to receive. It is not only what the author has to say but how she says it that makes this volume one of real value and real interest.

Every nurse—pupil or graduate—should become familiar with this book and its contents.

NEW AND NONOFFICIAL REMEDIES, 1916. Published by the American Medical Association, 535 North Dearborn Street, Chicago. Cloth, 450 pages.

This 1916 volume of New and Nonofficial Remedies contains the descriptions of the articles which have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association prior to Jan. 1, 1916. The acceptance of the articles was based in part on evidence supplied by the manufacturers and agents, and in part on investigations made by or under the direction of the Council. Physicians should understand that acceptance of an article by the Council does not necessarily mean recommendation. Furthermore, it should be remembered that the Council has been created and is following certain rules of procedure with the one object of protecting the medical profession and the public against fraud, undesirable secrecy and objectionable advertising in connection with proprietary medicinal articles. Therefore, the acceptance of articles indicates that the manufacturers are complying with the rules of the Council.

ELEMENTARY BACTERIOLOGY AND PROTOZOLOGY. For the Use of Nurses. By Herbert Fox, M.D., Director of the William Pepper Laboratory of Clinical Medicine in the University of Pennsylvania. Second Edition, Revised and Enlarged. 12mo, 251 pages, with 68 engravings and 5 color plates. Cloth, \$1.75 net. Lea & Febiger, Philadelphia and New York, 1916.

These subjects are presented in such a way that they can be readily understood by the nurse. This is an elementary textbook, but one that contains all the knowledge the nurse should have. The clinical relationship of micro-organisms is given as fully as it can be in a text of this sort.

The only word of criticism we can suggest is that the author should have included something about our knowledge of the etiology of poliomyelitis. It seems to us that the recent work of Flexner and his co-workers has almost—if not conclusively—demonstrated the organism causing this disease. So much has been done along this line that nurses and beginners ought to be told something, no matter how little, about this important subject.

AUTOPLASTIC BONE SURGERY. By Charles Davison, M.D., Professor of Surgery, University of Illinois, College of Medicine; Fellow of the American College of Surgeons; Surgeon to Cook County and University Hospital, Chicago, and Franklin D. Smith, M.D., Clinical Pathologist to University Hospital, Chicago. Octavo, 369 pages, with 174 illustrations. Cloth, \$3.50 net.

Although this work is intended primarily for surgeons, it contains a great deal of interest for the general man and everyone who has to deal with bone surgery in any of its forms.

We agree with the authors in their belief that there is a demand for a good treatise on the subject of transplantation of bone. They present this volume with the idea of filling this need.

The great progress made in this branch of bone surgery is truly marvellous. The authors show in their work quite conclusively what brilliant successes can be obtained by means of autoplasmic bone transplantation after other methods have failed. Their experience is quite convincing and their opinions based on study and experience deserve careful attention. The authors may feel that they have given the profession a book of real merit, a work that will be appreciated by everyone who realizes the importance of this subject.

PRACTICAL CYSTOSCOPY AND THE DIAGNOSIS OF SURGICAL DISEASES OF THE KIDNEYS AND URINARY BLADDER. By Paul M. Pilcher, M.D., Consulting Surgeon to the Eastern Long Island Hospital. Second Edition, thoroughly revised and enlarged. Octavo of 504 pages, with 299 illustrations, 29 in colors. Philadelphia and London: W. B. Saunders Company, 1915. Cloth \$6 net; Half Morocco \$7.50.

While the second edition of this excellent work presents considerable modification, including the re-writing of several chapters, yet the most noticeable improvement is the addition of an entire new section devoted to the subject of pyelography. All of the newer methods of diagnosis are described and their practical application discussed. Numerous excellent illustrations, some of which are in color, aid in elucidating the text.

The chapters devoted to a consideration of the high frequency current as used in the bladder, including a discussion of the equipment necessary, and giving the technic in detail of using the current, are especially complete. The operator is instructed in the application of the spark, the interval between treatments, the evidence of cure, the difficulties encountered, and the indications and contraindications for the use of the current.

The appendix shows some useful special cystoscopes of American manufacture, but the author has not felt that it was necessary to overload the book with illustrations of all of the newer types of instruments, many of which are of questionable value. He has, however, noted the improvements that are of distinct value, and especially those that are of value in carrying out the newer methods of treatment.

The work is recommended as being distinctly up to date and practical.

THE BASIS OF SYMPTOMS. THE PRINCIPLES OF CLINICAL PATHOLOGY. By Dr. Ludolph Krehl, Ordinary Professor and Director of the Medical Clinic in Heidelberg. Authorized Translation from the Seventh German Edition. By Arthur Fredric Beifeld, Ph.B., M.D., Instructor in Medicine, Northwestern University Medical School, Chicago. With an Introduction by A. W. Hewlett, M.D., Professor of Internal Medicine, University of Michigan, Ann Arbor. Third American Edition. Cloth, \$5. Philadelphia and London: J. B. Lippincott Company, 1916.

Krehl's work on "Pathologische Physiologie" was first translated into English by our well-known American internist, Dr. Hewlett, who prepared the first two American editions. With the latter's permission Dr. Beifeld now presents the third American edition, which is based on the seventh German edition of this work.

The new edition has brought this work up to date. All the noteworthy advances made in medicine since the appearance of the last American edition have been incorporated in this new book.

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To understand clearly disease in all its aspects one must know not only the nature and extent of the specific morbid changes, but also the alteration or perversion of function of the affected parts. The study of physiology under the abnormal conditions of disease is just as important—if not more so—than the study of anatomy under these conditions. That is the scope of this work. It discusses the pathologic physiology of disease as fully as it is known at present. Obviously, a book of this sort is quite different from the ordinary run of texts offered to the medical profession, and it is, therefore, a welcome addition to one's medical library.

The only word of criticism we have to offer is in connection with the author's remark that *tabes* is not "immediately syphilitic." We think it is now generally accepted that *tabes* is the direct and immediate result of luetic infection. Either the author does not accept this idea in spite of proof which is practically conclusive, or he has failed to make his meaning in the use of those words clear enough to be generally understood.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE. By James M. Anders, M.D., Ph.D., LL.D., Professor of Medicine and Clinical Medicine, Medico-Chirurgical College, Philadelphia. Twelfth Edition, thoroughly revised. Octavo of 1,336 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$5.50 net; Half Morocco, \$7 net.

The demand for twelve editions of this well-known work attests its popularity. A feature that is followed throughout all the editions is the aim to associate the clinical symptoms with the morbid lesions, and due emphasis has been placed on the history which is an important part of the routine to be employed in arriving at definite conclusions. Such rapid advances have been made in our definite knowledge of the practice of medicine in its various phases, it has become necessary for the author to revise the text, and in many instances rewrite whole chapters. On questions of leading importance the writings of others have been quoted because, as the author says, they represent views which in some instances at least are at variance with those of the author, but in presenting their writings the reader is placed in a position to form judgment for himself. Much new matter has been added, including sections on colon bacillus infections, large cell splenomegaly, tuberculosis of the thyroid gland, vagotomy and hypophyseal obesity. The subjects partly rewritten and also the more important additions are the following: diabetes mellitus; hydrothorax; gastro-enteroptosis; acute anterior poliomyelitis; rôle of the cockroach in spread of cholera; glycyltryptophan reaction in cerebrospinal meningitis; neosalvarsan; Schick's test for antitoxin in blood in diphtheria; complement-deviation test in pertussis; d'Espine's sign in tuberculosis of the bronchial lymph glands; phenolsulphonephthalein test in nephritis; splenectomy in pernicious anemia; chronic percholecystic adhesions in gallstones; Bárány and Neumann's test in diagnosis of labyrinthine disease. A valuable feature of the work is the differential diagnosis tables, of which there are many. As in former editions, the matter is presented as concisely and tersely as possible with the comprehensiveness that is desired. In bringing the work up to date the author has insured an increasing popularity for this well-known textbook.

FRACTURES AND DISLOCATIONS—DIAGNOSIS AND TREATMENT. By Miller E. Preston, A.B., M.D., First Lieutenant, M. R. C., United States Army; Surgical Examiner, Colorado State Board of Medical Examiners. With a chapter on Roentgenology. By H. B. Stover, M.D., Professor of Roentgenology, School of Medicine, University of Colorado; Member of American Roentgen-Ray Society; Visiting Roentgenologist to City and County Hospital, St. Joseph's Hospital and Children's Hospital, Denver. 860 illustrations, 813 pages. St. Louis: C. V. Mosby Company, 1915.

In many respects this work represents a distinct departure from the customary manner of discussing fractures and dislocations. The object has been, as the author says, to offer the reader a working knowledge of the subject in as few words as possible, avoiding for the most part all theories and arguments which are void of practical value to the surgeon who has to diagnose and treat the various injuries which are met with in actual practice. To insure a better understanding of the subject, the author has endeavored to make the reader an eye witness to the various deformities as they appear immediately following the accident, rather than to offer him lengthy text in describing the lesions. He has, therefore, introduced a large number of photographs, secured at no little expenditure of time and a great deal of inconvenience, for the purpose of illustrating and familiarizing the reader with the average clinical deformity.

The time-honored academic classification of fractures under one heading and dislocations under another, has been abandoned and the more practical method of considering the injuries according to the region in which they occur has been followed.

The author lays special emphasis on the information to be gained by inspections in the average case of fracture or dislocation, and he says that the information thus gained may be put to immediate use with a minimum amount of manipulation of the parts, and without being obliged to await the returns of a Roentgen-ray examination. The more one learns by inspection in establishing a diagnosis in a given case the less there remains to be determined by palpation, and if the surgeon develops the faculty of recognizing what he sees the patient will many times be relieved of much unnecessary manipulation and suffering to say nothing of the damage that may be inflicted on the already traumatized soft tissues.

The author highly commends the use of the Roentgen ray as of inestimable value in the diagnosis of fractures and dislocations, but very truthfully says that this very aid has resulted in our becoming very lax in other methods of diagnosis. The Roentgen ray should not be expected to supplant other physical clinical methods of diagnosis. The surgeon should make a practice of determining the nature and location of the fracture as accurately as possible, due care being exercised to avoid undue manipulation, before the Roentgen ray is taken, and later to compare his conception of the condition with the roentgenogram.

Throughout the entire work the author has made a special effort to supply the data for the development of a keen sense of diagnostic acumen, and his many deviations from the plan followed by the ordinary textbook will be found of distinct value. The illustrations, of which there are many, are for the most part excellent, and but little fault can be found with the treatment that is recommended for the various abnormal conditions that are discussed.



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ENTERED AS SECOND CLASS MATTER, JAN. 20, 1908, AT THE POSTOFFICE AT FORT WAYNE, IND., UNDER ACT OF CONGRESS OF MARCH 3, 1897.

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Associate in Surgery, Northwestern University Medical School; Associate Surgeon, Mercy Hospital; Attending Surgeon, Cook County and Provident Hospitals, Chicago.

Octavo, 888 pages, with 656 engravings. Cloth, \$6.00 net.

In the preparation of this work the author has carefully culled from the literature the information which seemed most helpful, and with it has combined his own ideas and experiences in order to cover the field and to present a clear understanding of this important branch of surgery. Much of the clinical and all of the statistical material has been obtained at the Cook County Hospital, Chicago.

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VOLUME IX

FORT WAYNE, IND., JUNE 15, 1916

NUMBER 6

ORIGINAL ARTICLES

SMALL CYSTS OF THE OVARY*

JAMES A. WORK, JR., M.D.
ELKHART, IND.

A problem which confronts the surgeon frequently and which calls into action all his better reasoning powers is that of the proper disposal of small cysts found on the ovary. Large cysts of the ovary hold a spectacular position in gynecologic surgery. Their immediate removal on discovery with conservation of every bit of normal ovarian tissue possible is the last word on that subject.

Within a moment any of you may call to mind a number of women patients, married and unmarried, who have come to you for medicine, for surgery, for any treatment that would relieve them of their unbearable existence. Inquiry into such a case has revealed to you the history of a dysmenorrheic, either typical or atypical, who after years of monthly suffering has been told she had cystic ovaries and that they must come out. The abandon of a desperate soul and an exhausted nervous system have thrown down the bars and she has consented to "have everything taken out." After the operation she was told that cystic ovaries were found and removed and that now at last she would enjoy good health. She went home from the hospital. She was a young woman, married, no children. In the course of the next few months she told her husband she could not possibly endure sexual contact another time. He was either considerate or not and you may finish the story yourself with chapters of invalidism, separate living, infidelity, insanity, suicide. This type has occurred several times within my knowledge.

As recently as 1911, Reynolds of Boston, in a paper before the Clinical Congress of Surgeons at Philadelphia, defended Battey's operation for the cure of dysmenorrhea, and insisted that the results in some 106 cases bore him out in his conclusion that dysmenorrhea and other symptoms peculiar to women are caused by small cystic ovaries, "those the size of an American walnut to the size of an English walnut, of rounded contour, thickness often as great as their width, frequently shortened a little by tension within, due to small cysts or semisolid bodies." Out of his 106 cases of oöphorectomy for cure of dysmenorrhea, mittelschmerz and similar conditions, he claims eighty-nine recoveries.

In the discussion which followed, J. M. Baldy in a candid, outspoken, not to say emphatic manner, condemned the contention of Dr. Reynolds. He observed that "hydrops folliculi are perfectly normal to an ovary and have no further significance than that the ovary has by an abortive effort gotten rid of one of very numerous ova contained within its body."

This paper was undertaken with the object of determining what is a normal, a physiologic cyst, and what constitutes a pathologic cyst.

When a graafian follicle begins to ripen it sinks from the cortex toward the center of the ovary. The blood supply of the ovary is increased and there is a local congestion around the growing follicle. The cells of the follicle proliferate rapidly, the liquor folliculi increases and the follicle then approaches the surface of the ovary. At the spot nearest the surface the theca folliculi atrophies or its fibers separate, an area of necrosis appears and the follicle bursts at this point and the ovum surrounded by protective cells escapes. Occasionally the follicle does not burst, the ovum dies and the follicle undergoes involution. After the escape of the ovum and part of the liquor folliculi out of the graafian follicle, the walls of the latter collapse,

* Read before the Surgical Section of the Indiana State Medical Association, Indianapolis, Sept. 24, 1915.

and any space remaining fills with blood from ruptured vessels of the tunica propria. It is probable that a little blood flows also into the peritoneal cavity. This may be enough to be of clinical importance, even fatal. The membrana granulosa disappears and the cavity is invaded by connective tissue cells from the theca containing a yellow refracting pigment—lutein. There is a very active production of lutein cells, which come to lie in festoons around the central blood clot. The small collapsed follicle grows in two weeks to the size of a white bean and shows the irregular yellow outline of lutein cells around the red blood clot. Fibrous tissue grows into the lutein mass and the blood clot from the periphery, giving the structure its irregular outline, and at the end of three weeks the corpus luteum, as it is called, is the size of a kidney bean. Now retrogression occurs, the connective tissue replaces the lutein cells, whereby the yellow color is changed to silvery white, the corpus albicans. After several weeks more the corpus luteum is represented only by a small retracted scar.

If pregnancy supervenes on this ovulation, the great vascularity of the parts, or some other factor whose nature can not be surmised, causes an excessive growth of the corpus luteum. The histologic changes are the same as described, but they are greater and prolonged. The full growth is attained at the thirteenth week of pregnancy, when the yellow body may occupy one third the extent of the ovary, being the size of a large hazel nut, sometimes palpable on bimanual examination. It continues of this size until toward the end of pregnancy when retrogressive changes begin which are completed several months after delivery.

The corpus luteum resembles in structure the suprarenal gland and is derived from the same fetal cells—the celom. All other theories have given way to the one which ascribes to the corpus luteum the responsibility for the changes of menstruation and gestation. Leo Loeb has conclusively shown that the corpus luteum prepares an internal secretion, ferment or hormone which sensitizes the uterine mucosa so that it reacts to the stimulation of the ovum with the production of exuberant decidua or maternal placenta. The stability of pregnancy also depends on this internal secretion, inasmuch as removal of the ovary in the early months of pregnancy usually causes abortion. The breast changes in pregnancy are also due to this ferment reaching the breasts via the blood. The changes in the female at puberty, the symptoms of the menopause, the exaggerated phenomena

in the nervous system and in metabolism observed so often after castration, and the occasional relief obtained by administration of ovarian extract justify the assumption of an internal secretion of the ovary.—De Lee.

In agreement with Baldy, then, it is true that not all ovarian cysts large enough even to be palpated by bimanual examination are pathologic, that a false corpus luteum may be the size of a kidney bean with surrounding congestion of the ovary, and a corpus luteum of pregnancy may attain one third the size of the ovary or about that of a large hazel nut. There may even be found two or three of these bodies in one ovary at the same time and be within physiologic limits. Their vast importance to the economy of the female organism can no longer be denied.

Pollosson and Violet and others have observed that simple or serous ovarian cysts, showing of themselves absolutely nothing characteristic of tuberculosis, occur in conjunction with tuberculous tubal or peritoneal lesions. They report a case in which a cyst the size of an adult head, containing 2 liters of serosanguinous fluid, was attached to a tube showing positive tuberculous changes but without suppuration. The cyst appeared to be of corpus luteum origin. They record two more cases of tubal tuberculosis associated with bilateral ovarian cysts the size of oranges. It is observed that the associated tubal lesion and cyst formation in this class occur only in conjunction with attenuated or slowly developing forms of tubal tuberculosis. A second class of cases is noted in which there is microscopic evidence of healed tubal or peritoneal tuberculosis and the cystic degeneration of the ovary. In the walls of the tubes of such patients there are found small nodules containing caseous matter. Occasionally the continuity of the tube is completely interrupted and the pelvic organs buried in adhesions. A third group comprises patients in whom the tuberculous origin of the ovarian cyst is maintained only by inference. The other pelvic organs and surrounding peritoneum are apparently normal. There is a tuberculous family history and the suspicion that the cyst is of tuberculous origin is subsequently confirmed by development of tuberculosis elsewhere in the body. It is concluded that the tuberculous inflammation acts by causing ovarian congestion, excessive maturation of follicles, these conditions leading to the formation of sclerocystic ovaries, hematomas and large simple cysts.

Bland-Sutton reports a case in which the inflammatory origin of the cyst was definitely

proved. The patient had been treated one year previously for typhoid fever. The cyst was congested, but showed no axial rotation on its pedicle. It contained 50 ounces of yellow purulent fluid free from odor. A pure culture of the *Bacillus typhosus* was obtained. In a second case reported by Bland-Sutton, the patient had had typhoid fever sixteen years previously and an ovarian cyst was opened and drained soon after, a sinus persisting for nine months. Bland-Sutton found an infected ovarian dermoid, the pus containing both *Bacilli typhosus* and streptococci. The patient's blood gave a strong agglutination reaction, though both urine and feces were negative.

Within the past two or three years, then, the inflammatory nature of some simple and hemorrhagic ovarian cysts has been well established.

Far and above all other contributions on the nature of ovarian cysts is the report of the work of MacCarty and Sistrunk at the Mayo clinic. These men also, in their study of 1,000 pathologic specimens of ovarian cysts, have dealt only with small cysts—smaller than a hen's egg. Qualities possessed by these small cysts have wide and very different prognostic significance. The material used in their investigation consisted of ovaries removed for definite pathologic conditions, apparently normal ovaries removed during the course of complete hysterectomies for uterine carcinoma and ovaries obtained at necropsy. The chief distinguishing feature of an ovarian cyst is the lining epithelium, and on this their conclusions are based. In the lining of a single small cyst they found three distinct features: (1) the many layered epithelium of the graafian follicle and simple cyst; (2) the columnar epithelium of the cystadenoma; and (3) the papilloma of the intracystic papillary cystadenoma. Simple cysts containing clear fluid seem to originate from graafian follicles (from what cause is not conjectured), inasmuch as both have a smooth inner surface which is composed of from two to six layers of small oval or round epithelial cells. Such a cyst may attain the size of a human head. These simple cysts may be unilocular or multilocular, and hemorrhage may occur into the interior (intracystic) or into the wall (extracystic).

Cystadenomas are lined by columnar or cuboid epithelium and contain a highly albuminous, pseudomucinous or gelatinous material. These also may be single or multiple and intracystic or extracystic hemorrhage may occur. Papillomatous neoplasms may grow into the lumen of the cyst or the growth may penetrate the underlying tissue and present itself as a true

adenocarcinoma, thus forming a solid mass in the cyst wall. The cyst wall may break and a papilloma show as cauliflower-like excrescences on the peritoneum surrounding the ovary.

The line of demarcation between a normal corpus luteum and a so-called corpus luteum cyst is not definite. For practical purposes any hemorrhagic cyst smaller than a fist or perhaps a child's head, in the wall of which cyst lutein cells are subsequently demonstrated, may be called a corpus luteum cyst. In the light of our present knowledge,

1. The microscope is necessary to differentiate between a simple hemorrhagic or nonhemorrhagic cyst and a cystadenoma which is potentially malignant.

2. It is impossible at present to be certain that artificial rupture at operation of a small ovarian cystadenoma will prevent further development. Large cystadenomas certainly do continue to develop after rupture.

3. To a surgeon operating in a hospital not equipped with apparatus necessary to make a microscopic diagnosis during operation, two results are possible. He may remove a normal ovary containing no more serious pathology than a simple cyst or he may leave an apparently normal ovary containing a cystadenoma, potentially carcinomatous.

Dermoid cysts belong to the class of embryomas or teratomas. They also occur in other tissues than ovarian. In the ovaries they spring from nests of cells implanted in early fetal life. In the Mayo clinic 14 per cent. of all cases of dermoid cysts occur in both ovaries. In a case recently operated we found bilateral dermoids. The larger specimen was about the size of two fists, while the smaller, without careful scrutiny, might easily have been passed for a normal ovary.

The last word in ovarian cysts has not been said. The woman who is about to lose both ovaries because she has dysmenorrhea or "pain in her ovaries" (quoted) must be given more consideration. Reynolds of Boston is probably sorry he wrote his paper in 1911. There is a reaction both in the profession and with the public against the castration of women. A gynecologist should have a written report from a good pathologist on every ovary or part of ovary removed, and this report should be on file to show the patient or her husband. Dysmenorrhea is due to malformations or malpositions of the uterus especially to the elongated, infantile cervix and is relieved by appropriate treatment of the uterus. Cysts of the ovary are not the cause of painful menstruation.

The importance of small ovarian cysts rests on the kind of epithelium which lines them. A simple cyst derived from a graafian follicle may be punctured and left with impunity. A small cyst showing columnar epithelium is a cystadenoma; it contains gelatinous material; it will become a papilloma; it may become an adenocarcinoma.

Careful history taking, a painstaking pelvic examination, under anesthetic if necessary, a careful general physical examination, aided by laboratory tests and roentgenograms of the chest for evidence of past or present tuberculosis, and then the ability at operation positively to differentiate between a normal corpus luteum and a small simple cyst, a small dermoid, a small cystadenoma—with these routine procedures many women will be saved the years of mental and nervous torture which attend an early surgical menopause, and at the same time they will be safeguarded against the possibility of pelvic cancer.

THE TONSIL *

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In presenting this paper before this section it may be possible that I am carrying coal to Newcastle, but my apology is the fact that during the last few years the faucial tonsil again has assumed a rather prominent place in laryngologic literature, judging from the number of papers appearing in general and special medical journals and papers read before special societies dealing with the physiopathology of the faucial tonsil and its seeming influence on neighboring and distant body ailments. This has proved, to me at least, that we are not as yet absolutely sure of our knowledge of the faucial tonsil, its probable function, the indication for tonsil surgery, etc.

The tonsil question seems to need a rehearing before medical and surgical tribunals, because the operation for the removal of the tonsils has become a frequent surgical procedure in the last few years, not only by laryngologists, but by general practitioners as well. I have been asked by conservative physicians and by well-read intelligent laymen if the seeming wholesale removal of the tonsils is justified by research and investigation, and whether or not surgical enthusiasm is leading some of us astray as far as

the tonsil is concerned. With this end in view I have undertaken a search in the laryngologic literature at my command in order to enlighten myself on the following:

1. The function of the tonsils.
2. The relation of tonsils to systemic and focal infections, especially tuberculosis, arthritis, cardiovascular and renal infections (hypertension, acute and chronic nephritis, etc.).
3. Can we demonstrate the transmission of infection from the tonsils to the lungs, joints, kidney, etc.?
4. The indications for the removal of the tonsils and choice of method, tonsillectomy or tonsillotomy, which and when?
5. Preparation of the patient. The anesthetic, accidents during the operation, postoperative care and possible complications.
6. Results of the operation, the improvement of the general conditions for which the tonsillectomy was undertaken, the voice after tonsil operations in the young and adult.

In this short paper I will confine myself to a very brief résumé of the data thus collected, interposing some of my own experience and observation. My sole object is to bring out a clarifying discussion by the members of this section.

Function of the Tonsil.—The function of the tonsil is still a mooted question. In the normal state it is thought to be a protecting organ, a policeman as it were, stationed at the upper respiratory tract to arrest micro-organisms. This theory probably would be tenable if respiration was effected by the mouth, but since normal respiration must and in the majority of cases is effected through the nose, the protection theory is untenable. Again, early in life it assists normal leukocytosis, losing this function in adolescence or when diseased. The tonsil, some authors believe, secretes an antitoxin and furnishes moisture for deglutition. The last statement, I believe, is partly true, for I have seen several patients who complained of dry throats for months after their enormously hypertrophied tonsils had been removed. Ashurst believes the function of the tonsils is to eliminate toxins from the tissues. In the support of his theory he advances the well-known clinical phenomenon of the appearance of local tonsil manifestations some days after the other signs of the disease have been present as in scarlatina. Sheedy thinks that immunity is assisted by the tonsil. In short, the consensus of opinion is that the tonsils have some special function, especially in early life, and while they

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are only one link in the chain of barriers to bacterial invasion, and their removal cannot be a great physiologic calamity, nevertheless the tonsils should be respected when healthy, although enlarged, as functioning organs, and their removal should be undertaken only when the patient presents symptoms of embarrassed respiration or when they exercise pressure backward and upward in the region of the ostia of the eustachian tubes with consequent tubal obstruction and deafness.

The Relation of the Tonsils to Systemic and Focal Infections.—"The close relationship that often exists between acute articular rheumatism and acute tonsillitis has been observed for many years. At times the joint and throat symptoms are simultaneous in their onset, while again the tonsillitis precedes the arthritis and may even completely subside before the joint lesion develops. Subacute or chronic infectious arthritis is often associated with recurring attacks of tonsillitis, the tonsils lighting up previous to each fresh exacerbation of the joint lesions; or the tonsils may be the seat of a low-grade chronic inflammation lasting for months, with frequent outbreaks of a more acute character."

"Endocarditis and pericarditis not infrequently follow even very mild attacks of acute tonsillitis. Chorea may be present, with or without cardiac or arthritic symptoms. Acute, subacute or chronic parenchymatous nephritis are beginning to be looked on as possible sequelae of tonsillar infections. This intimate association of joint, heart and kidney lesions with tonsillar inflammations, and the sequence of the symptoms, strongly suggests that the tonsils may be the primary seat of the infection. Their involvement might, of course, be secondary to a primary infection elsewhere; indeed, such secondary acute inflammations of the tonsils at times occur in the course of septicemias of other focal origin. The history and sequence of events in these cases, however, are usually obvious, as they are also in the inflammatory conditions of the tonsil which follow acute nasal lesions" (Barnes).

The relation of the tonsil to cervical adenitis seems to be well established clinically. We all have seen cervical adenitis subside after the removal of hypertrophied or diseased tonsils, but I also have seen cervical adenitis manifest itself two weeks after the removal of enormously large tonsils. The tonsillar fossae were clean and postoperative healing was clinically complete before the adenitis manifested itself.

The relation of the tonsil to pulmonary tuberculosis seems to be a fact noted by a suffi-

cient number of careful observers. The tonsil seems to be the atrium of infection. The germs are carried through the deep cervical lymph glands and by connecting lymphatic branches to the apices of the lungs, as demonstrated by Dr. Robertson of Chicago. Nevertheless, clinicians differ on the advisability of removing the tonsils in the presence of pulmonary tuberculosis; some hold that it is of no advantage to do so, while one clinician says that a tonsillectomy in a tuberculous subject is a serious disadvantage, the tuberculous process being apparently hastened thereby.

The Tonsil and Its Relationship to Hyperthyroidism.—I understand that several papers on this subject have appeared lately, but I either overlooked them or the literature was inaccessible to me. Nevertheless two cases were related to me by a prominent laryngologist. Both patients had exophthalmic goiter and large diseased tonsils. In both cases a tonsillectomy was done preliminary to a thyroidectomy. In both patients the symptoms of hyperthyroidism and the exophthalmos rapidly subsided and they are now apparently well and in possession of their thyroid glands.

While in Philadelphia recently I visited an old friend, a very busy internist. In the course of the conversation the subject of the tonsil and focal infection came up and he related to me two cases of acute appendicitis which followed closely streptococcic tonsillitis. One patient, a boy, was operated and recovered, the other patient, the wife of a physician, also was operated but died from general sepsis.

Dr. Matthews of the Mayo clinic, in a personal communication, tells me that they have removed diseased tonsils for the cure of sciatica and that the results are apparently good.

The indications for the removal of tonsils are given about as follows: Recurrent tonsillar or peritonsillar abscess. Recurrent tonsillitis. Diseased tonsillar crypts, with or without hypertrophy. Frequent attacks of rheumatism with coexisting tonsillitis. Mouth breathing accompanied by large tonsils. General toxemia of tonsillar origin with impaired nutrition. Hypertrophy of the tonsil with coexisting dyspnea. It goes without saying that malignant neoplasms of the tonsil call for complete eradication of diseased tissue.

The removal of the tonsil having been decided on, what shall it be, a tonsillectomy or tonsillotomy? Again a diversity of opinion. European specialists still seem to favor tonsillotomy as sufficient in a majority of cases except where the tonsils are very diseased.

American laryngologists favor tonsillectomy as giving the best results. However, one prominent American specialist favors tonsillectomy within the capsule, that is, the eradication of the tonsil tissue, but leaving the capsule intact in the tonsillar fossa, thereby preventing adhesions of the pillars to each other and impaired mobility of the musculature of the throat with consequent impairment of the voice.

The custom to remove tonsils when removing adenoid tissue is approved by some and condemned by others. Richard says that since no one apparently misses the glands when they are out it is better to give the child the benefit of the doubt and remove the tonsils when the adenoid tissue is removed. My own experience has taught me that when the adenoid is very large its removal will establish nasal respiration, and the tonsils, if not diseased, will shrink in a few weeks, their previous enlargement being a compensatory hypertrophy as it were while mouth breathing existed.

Patients in a fair state of health need no special preparation beyond cleansing the nose and throat with a warm alkaline solution, several times during the twenty-four hours preceding the operation, and the application to the parts of a 25 per cent. solution of argyrol or Lugol's solution. Those in delicate health, especially children, should be toned up before the operation, as much as possible, in order to avoid great depression afterward. The temperature is taken twice or three times the day previous to operation. If an elevation of temperature is present, it is best to postpone the operation until its cause is found and removed. Failure to observe this point may lead to very unpleasant complications, sometimes, especially in children, for we may operate on the eve of diphtheria or scarlet fever. I speak of this from bitter experience. Of course if the tonsils are so diseased that a constant systemic absorption of toxic material takes place, producing fever, we may then disinfect the tonsils as much as possible and proceed with the operation.

To increase the coagulability of the blood, I am now using pituitrin as advised by Professor Citelli of Catania, Italy. The pituitrin is given hypodermically half an hour before the operation. If there is any suspicion of hemophilia, normal horse serum should be administered twenty-four hours before the operation and pituitrin one-half hour before. Of course, we must not operate on homophiliacs unless conditions demand an operation. In all other respects tonsil patients are prepared the same as for any other major surgical operation. Not to prepare the patient carefully is a mistake.

It is not to the physician's interest to tell the patient's family that a tonsil operation amounts to very little, or is a safe procedure, and it is certainly to the doctor's discredit if unpleasant complications develop. We all know that in the hands of the most excellent surgeons, and with every precaution, serious accidents or complications have occurred. Any operation which can have serious results should be looked on as a major surgical procedure and not treated lightly. This is the opinion of the majority of careful surgeons.

The Anesthetic.—The majority of operators select ether as the safest. A few use chloroform in children up to 12 years of age, after that age ether. A few employ nitrous oxid and oxygen. Personally, I favor ether in all cases except when there is a contraindication to its administration. In adults who are composed and willing to assist the surgeon I favor at all times local anesthesia with the patient in the semirecumbent position.

Method of Operating.—There never was, nor I may say never will be, a universal method of removing tonsils, but on this point I have nothing to say, since every method is good which accomplishes perfect results. It is not the particular method, nor the particular instrument, but the man behind the instrument that accomplishes the result.

Accidents During the Operation.—I will speak of one only and that is hemorrhage. The question of hemorrhage during or after tonsil operations is worthy of our serious consideration, and the operator always must be ready to cope with it. Pressure, styptics and adrenalin have been employed universally and are recommended in textbooks. We are criticized severely sometimes by general surgeons for our seeming neglect in not learning to ligate a bleeding point in the fossa tonsillaris. It is true that it is very difficult to ligate a vessel in the fossa tonsillaris, but I believe it is not more difficult than to ligate a bleeding point deep in the abdomen or vagina. It is a matter of practice and one must try and master it. The patient places himself in our hands and we must protect him from the danger of exsanguination. Dr. Joseph C. Beck of Chicago for the last six months or so has employed an implant in the tonsillar fossa as a routine. The implant consists of a sponge saturated in compound tincture of benzoin and is held in place by a single heavy suture through both pillars. The implant is removed at the end of twenty-four hours. While this method is not a necessity in every case, it ap-

peals to me as excellent in case where there is doubt as to postoperative hemorrhage.

After-Treatment.—The after-treatment is a matter of individual preference. I seldom make local applications to the operated area unless a pseudomembrane forms and persists. It is well to order a mild antiseptic gargle and mouth wash and to keep the teeth well cleaned after the operation as before. Internally I am in the habit of prescribing the time-honored mixture of tincture ferri chloridi in glycerin and water, as advised by Dr. Barnhill. It goes without saying that the patient should be kept in the hospital and in bed for at least twenty-four hours after the operation. During the first day nothing but cold and liquid food should be taken, after that, the feeding will depend largely on the amount of discomfort that the patient has in swallowing.

Complications.—Among the complications which have been observed after the operation are: Otitis media suppurativa, with and without mastoiditis; infection of the field of operation with cervical adenitis; peritonsillar abscess; due to an incomplete operation; and general sepsis with fatal issue. This latter serious complication may arise if the operation has been performed soon after the subsidence of a streptococic tonsillitis. In my own practice I have had to cope with otitis media suppurative and diphtheria developing on the third day after the operation. Luckily both patients recovered.

Is the voice sometimes injured by the operation, as the laity seem to believe? Specialists who have had a considerable experience with professional singers guardedly admit that for a short time after the operation there is an alteration in the voice, followed in a few months by marked improvement, so much so that higher and more melodious tones were attained than before the operation, and they advise that singers should be cautioned to abstain from singing for a while or to sing only in low registers. If alteration of the voice is permanently noted it is due to injury of the pillars and adhesions which hinder the mobility of the throat musculature.

The effect of the operation on the general health in the majority of cases is most excellent, to the great satisfaction of physician and patient. This has been my experience.

In conclusion, I express the hope that my paper will evoke a discussion which will clear up disputed points and will help us all. For:

"Toiling is not toiling
When the service that we give,
Is to keep the living loving,
And to help the loving live."

DISCUSSION

DR. C. NORMAN HOWARD, Warsaw: Mr, Chairman: I like the way Dr. Ravdin arranged his paper. You will remember, he spoke first of the function of the tonsil. What does the tonsil do? There have been a number of interesting hypotheses brought forward, but really, after all, we do not know what the tonsil does. By that I mean this: There has been no one man or group of men who have made enough observations, who have done enough research work, detail work, and delivered it to us as the opinion of the whole world. I think it will be a very fine thing when it is done. The hypotheses that have been brought forward so far, if all true, would make the tonsil a very busy little organ. It would be making blood; it would be making vaccines out of the bacteria which lie in its crypts; it would be letting toxins flow out of it into the body; it would be putting out enzymes in its influence on starch; it would have in some way some kind of an association with the generative organs; and then it might also act as a policeman, which is a very interesting term that Dr. Ravdin used—a very expressive term. Under that heading of policeman, we might say that if the tonsil is derelict in its duty it ought to be removed. Not for the first offense, however, any more than a policeman would be removed for the first offense; and perhaps not for the second or third, but it ought not to be permitted to continue its offense. Carrying it out further, it ought not to permit the hoodlums of the throat to get down into the system, because it is being found more and more, as I understand it, that the tonsil is being held responsible for a great many systemic infections. In the *American Journal of Surgery* for May, 1915, there is a very interesting article by McKesson bringing out that point, and a couple of years ago Shambaugh, before the American Laryngological Society in Washington, brought out the point that it was not only the acute infections that we had to blame the tonsil for, but the chronic ones as well, such as chronic nephritis and chronic neuritis, and arthritis deformans. He said that the tonsil at times is an etiologic factor in the production of these chronic conditions.

In regard to the method of taking the tonsils out, I think, as Dr. Ravdin said, that that is a personal question. Each man ought to take them out as he knows how. The idea is to get them out. As to where it should be done, I believe it is a hospital operation, and I think these patients ought to be in the hospital for twenty-four hours. In our little hospital that is the rule, and I think it a good one.

In regard to singers, I remember a while ago I had a patient who had a very fine voice. Singing was his business. And in that voice he had a particular resonance that would make

money for him. His tonsils seemed to require removal, but I hesitated to operate. I did not know what would happen to the acoustics of his voice if they were removed, and I very frankly told him so, and that I believed I would not operate. Some time later, in some other place, he fell into the hands of a very good man, who did take them out, and the result was very good, and his voice was not spoiled at all.

From the literature, my own observation, and talking with others, I have come to the conclusion—the same as Dr. Ravdin—that it is not the removal of the tonsils, but the damage to the pillars that makes the trouble in those cases.

In closing, I would like to call attention to Clark's figures. He traced 143 of his cases after three or four years, and some of his summaries are interesting. First, in children there was no increase, apparently, in disease in those whose tonsils were removed. In fact, there seemed to be a certain amount of absence of disease. And then he also brought out this fact, that there was some improvement in the general health, which is usually to be expected after tonsillectomy, for cause. I want to emphasize those two words, *for cause*. I do not believe tonsils should be taken out just because we can, or somebody else has done it, but in each individual case because we know definitely and clean cutly that in that particular instance the patient will be better with them out.

DR. F. V. OVERMAN, Indianapolis: Dr. Black is not here to discuss this paper, as listed in the program, but I think I can express his opinion on the subject. Incidentally, I think there is one point in Dr. Ravdin's paper that is open to serious discussion, namely, the improvement of a singing voice after a tonsillectomy. With professional singers there is that thing in the voice that in the Middle West we call timbre; not resonance, not quality, but timbre. In other words, that thing in the voice that if you hear it outside, even if you do not see your friend, you know him by the timbre of the voice.

In the past two years I have had the opportunity of seeing the throats (not alone in my own practice) of some very famous singers. The man in the East who treats most of these patients insists that after a voice is placed—in other words, trained—while the singer has his tonsils, the removal of those tonsils invariably changes the timbre of that voice. To a natural voice, a voice unplaced by study, that perhaps is not true. I remember very well hearing him make this remark while looking into the throat of the famous Caruso who has badly diseased tonsils as you could see. During the opera season Caruso often is unable to appear because of peritonsillar abscess. But his specialist refuses to remove those tonsils, say-

ing he would be afraid to remove them while Caruso is in his singing prime.

The doctor speaks of injury to the pillars. It is a question in my mind how many cases of tonsillectomy you see years after that have not a deformed throat. I mean by that contracted pillars, perhaps pillars that are adherent on one side or the other, a uvula that is not in its normal position. Those are the things that alter the timbre of the voice. In other words, when a singer takes a head tone, where he must have absolutely free use of the pillars of the throat, it alters that action. So, as I said before, if a singer's voice has been placed in the presence of the tonsils, I believe in 99 per cent. of those cases the placing of the voice will have to be done all over again if the tonsils are removed.

DR. JOSEPH MAURER, Marion: In regard to what the doctor has just said about doing a tonsil operation and leaving scars, it seems to me that if you have an abscess, which produces more or less scar tissue as a result, the effect would be much the same as from operation—I mean the effect on the voice. There is always scar tissue following a peritonsillar abscess.

Dr. Ravdin said that if the tonsil is not diseased, why not leave it? The average man does a lot of tonsillectomies, and if he uses a snare, in turning the tonsil wrong side out, he often will discover that every crypt is full of a cheesy substance. This substance is not seen if a hook is used for the examination of the tonsil. How many cases of fistulous tracts do we see that could not be detected before the tonsil was removed?

DR. GEORGE W. SPOHN, Elkhart: If we, as rhinologists, cannot agree on this question of the singers, how can we expect the general physician, who is removing tonsils, to agree with us? We should do something—appoint a committee to investigate this thoroughly and report a year hence, and then settle this question one way or another. Dr. Maurer and some of the other gentlemen disagree. But if Dr. Maurer would stop to think that in operating on these singers, after the voice has been trained, as the previous speaker said, the voice is almost sure to change in some way. All the years of training have been done while there were two lumps present in the throat. If you remove those lumps, you will change the voice in some way. It is a little different from the condition following a peritonsillar abscess—quite different, in fact. I have noticed two or three singers who have been affected by the removal of the tonsils *in toto*—those very deep-seated tonsils, especially when the gland dips down into the muscular tissue, and we all want to remove it *in toto*. It seems to me that this one question, regarding the singers, should be settled. One theory must be right and the others wrong.

I do not like to hear the essayist give so many functions for the tonsil. I believe that we, in this meeting, should set an example for the general practitioners all over the state. Why? Because they are removing more tonsils than we are. We should look out for the interests of the suffering public, and try to do everything possible to relieve them.

So far as hyperthyroidism is concerned, and its cure by removal of the tonsils, the literature tells us these cases grow worse. There is a certain relationship existing between the ovaries in woman and the tonsils, according to some. Whether this is true or not, I do not know, but the men working along the line of internal secretion tell us that. But I cannot imagine that I would remove the tonsils to cure hyperthyroidism.

DR. L. C. CLINE, Indianapolis: Of course, when we have a paper on tonsils or adenoids we always have discussants. This subject has been discussed, to my knowledge, for thirty years, and I have been participating in it more or less during that time. I see an evidence that the profession is coming around to a sane position on this question of removal of tonsils. Medical men have run riot on the subject of removal of tonsils, just as they did on the subject of appendectomy and ovariectomy years ago. The public has been educated to the point where people come to a specialist and demand that their tonsils be removed, without an examination even. I have had that occur a number of times in my own experience, and three times in the last six weeks. Richardson of Washington, D. C., recently has written a paper calling attention to this particular point concerning the public, being overeducated and not relying on careful examination. Of course, there are some tonsils that should be removed. Large hypertrophied tonsils that have no business in the patient's throat, and are simply an obstruction, ought to be removed, and also some of the tonsils that produce quinsy. However, many of the tonsils that apparently cause quinsy can be reduced or cured without taking the tonsil entirely out. I know that from my personal experience. I have taken tonsils out without an anesthetic for twenty-five years, and it is the exceptional case in which I give an anesthetic for the removal of tonsils.

The point I want to make is that there is a lot of this work being done that is absolutely wrong and unnecessary. We must examine our cases and treat them as we do patients with other conditions. We were told that many of these cases cause a certain amount of rheumatic trouble and infection. We must remember that there are other points in the body that produce those conditions. We can have them from a colitis; we can have sepsis or internal infection from colitis and indigestion; we can have them from a torpid liver and from various other things. Lots of them come from bad teeth in-

stead of the tonsils. I am sure of that, because I know of cases that have come under my observation. The tonsils have been removed, but the case did not get well. Finally, the teeth were cleaned up, decayed ones removed and the case was cured.

DR. LAFAYETTE PAGE, Indianapolis: I think many things said ought not to be allowed to go unchallenged. One of them is the indications for removing tonsils. I would like some of the men present to tell me how we can always tell a diseased tonsil by examining the throat. There is no possible method (and I have been examining them for twenty years) of determining when the tonsil is diseased deep down in the structures. The superficial appearance of the tonsil is not by any means an indication always when the tonsil should be removed. This forenoon I removed a tonsil that I think any one who had seen it and examined it carefully would say was practically normal, yet this young man had been suffering from rheumatism and tenderness in the neck, and wanted the tonsils removed. I found pus deep down in the structures as soon as I opened them up.

We have cases of suppurating ears in which we do the radical mastoid operation, and still we find that the ear will keep on discharging, and will light up every time we have a fresh infection of the tonsil. We remove the tonsils, and the ear ceases to discharge. That has been not only my experience, but the experience of others. We find these infected crypts, that are constantly infecting the nasopharynx and continuing out to the middle ear. We cannot cure the ear trouble until the tonsils are removed, and these tonsils often look most insignificant—their appearance does not indicate that they are seriously diseased.

As to singers' throats, there is some truth in the claim that the throat is drier and the quality of the voice somewhat changed by the removal of the tonsils, because the singer is always training, and the adaptation has been to a diseased and abnormal condition, but sometimes the change is for the better. I have had some patients with good voices say that their voices have been improved by operation. Others claim that there is certain difficulty in getting the tones for a certain length of time, but I have not seen a single case in which, after a year or two, the dryness has not disappeared, and in which the quality of the voice was not restored. You will note that there are singers who always have laryngitis and more or less bronchitis, and how can you expect to ever get rid of these conditions when you have chronic infective crypts that are deeply infected, and pouring out their contents into the pharynx and intestinal tract? Many cases, as we all know, of indigestion and stomach and bowel trouble are cured by removal of the tonsils. That has been the observation of nearly every one who has done a great amount of this work.

It is perfectly natural that the muscles, every time the patient swallows, squeeze into the esophagus and stomach the contents of the diseased crypts.

Now, as to the anesthetic used. I have done the operation without any anesthetic at all, with all kinds of local anesthetics, and of late, for the last three years, have been using ether and gas exclusively, and in my experience the use of ether and gas is very much preferable to any local anesthetic. First, because I always can control the hemorrhage. I have my patient in the horizontal position, the head a little below, so that the blood does not run into the larynx and esophagus. In this way I can readily control the hemorrhage with the artery clamps. As the doctor says, there is no reason why we should not use artery clamps and ligate vessels in tonsil operations just as the general surgeon does. It is a matter of technic. By the use of Monsel's solution immediately after taking the tonsils out, we arrest the capillary oozing. After the sponge is removed, we can see any large vessels that are bleeding. If it is large enough to ligate, I always ligate it, and then I feel sure there will be no secondary hemorrhage. It is just a question of technic.

DR. JOSEPH D. HEITGER, Bedford: There seems to be a great variety of opinions regarding the tonsil problem, and no doubt a good many of those opinions are dependent on an ignorance of the fundamental problems regarding the tonsil. For instance, in regard to the blood supply of the tonsil. If you look in the average textbook for the blood supply of the tonsil, you will find that it is given as the third branch of the facial, as the most prominent; then the dorsalis linguae, the descending palatine of the internal maxillary, the ascending palatine of the facial, and the ascending pharyngeal. Now, there are a certain number of these vessels which do not go to the tonsil itself at all. They only go to the structure of the tonsillar fossa. One will not be able to find these detailed in any of the anatomies, so far as I have been able to find, but you must go to the monographs and special articles. Up to the present time I have been able to find this given in only one English article, and that is by Dr. J. Leslie Davis of Philadelphia. The other articles, so far as I have been able to detect, are largely in French and German literature. A great many who do not know French and German will not have access to these articles, hence the fundamental problems of the anatomy and blood supply of the tonsil will be more or less of a hazy matter.

I shall attempt in just a few minutes to clear up one or two points about this question. The tonsillar branch of the facial artery, which in most anatomies is given the greatest prominence, does not go to the tonsil at all, but, with an anastomosed branch of the dorsalis linguae, goes to the plicae and lower part of the muscular structure of the lower third to one half. The

real supply to the tonsil itself comes from the ascending palatine branch of the facial, which, with the descending palatine branch of the internal maxillary, forms a sort of anastomotic ring, breaking up into branches around the base of the tonsil. A branch from this anastomotic ring goes through the muscular aponeurosis and through the so-called capsule of the tonsil, and then breaks up. It may go directly through or it may run a little distance—from one-eighth to one-half inch—from the muscular aponeurosis and the capsule of the tonsil, and then pierce the capsule of the tonsil. The usual position of that piercing is in the upper extremity of the fossa. Along with that and emerging where it enters, as a rule, there are two veins, one which goes into the palatine plexus superior, and one which goes below into the pharyngeal plexus. The best dissection of the venous system and lateral region of the throat that I have been able to find is in the French—by Fougere.

DR. A. E. BULSON, JR., Fort Wayne: I do not think it possible to lay down any hard and fast rules for removal of the tonsils. Every patient is a law unto himself or herself. The sooner we arrive at this conclusion the better it will be for us. The fact is, every case must be studied carefully and the study should not be confined to the tonsil alone, but the patient as a whole. I will confess that I cannot tell always when I think the removal of the tonsil is going to benefit the patient. As an example of that: A young lady whom I have known ever since she was a child and treated on a number of occasions for various affections of the eye, ear, nose and throat, was sent to me within the past year by one of the very best internists in Indiana, with a letter saying: "Remove this young lady's tonsils and she will get well of her neuritis." I said to her, after examining the tonsils carefully and finding them small, atrophic almost—not being able by any sort of manipulation to express any cheesy deposits or septic material and not finding any areas of inflammation within the throat—that I doubted very much whether she would have any relief from removal of the tonsils. I told her she had better look elsewhere for the source of the infection. She consulted a very capable internist in our city, who, after going over her thoroughly, said he was inclined to agree with the first internist. So he told her to come back to me and ask me to remove the tonsils. She came back, and I said, "Very well; on the advice of two good internists, in whom I have the greatest confidence, I shall remove the tonsils, but I do not believe you will get any relief." I enucleated the tonsils, but she is suffering from her neuritis just as much as ever. As a matter of fact, there probably is a focus of infection somewhere else, perhaps in the teeth, that has not been discovered.

I also remember an analogous case, in which I gave the same opinion, and in which the con-

dition was practically the same, and the appearance of the throat the same. I was advised by the internist to remove the tonsils, and I removed them, with the most gratifying results.

Tell me, if you please, where we are going to draw the line. As a matter of fact, in the first pair of tonsils I found nothing. In the second pair I found in one tonsil only a small focus that had become enclosed by cicatricial tissue, and was the only possible site of the infection. Probably that accounted for the trouble. There did not seem to be any other cause for the relief.

We all have had cases of repeated attacks of rheumatism that report themselves as improved or well following the removal of the tonsils. On the other hand, we have had cases of rheumatism that did not get well, because the infection was elsewhere.

However, that the tonsils in a very large number of people do harbor infection that may and often does produce systemic disturbance is a fact established beyond a question of doubt, and the removal of such tonsils is eminently justified. We may sacrifice an innocent tonsil through honest though mistaken judgment as to its possibilities for producing trouble but even then, if the operation has been performed properly, the patient has been done no serious harm.

DR. WILLIAM S. TOMLIN, Indianapolis: There are a few points that I would like to discuss, from some observations and some personal experiences.

First, a word about the operation in certain cases. I have had some experience in operating on tuberculosis patients, perhaps more than ordinary on account of some friends who were in tubercular work, and have removed tonsils in several cases. These cases were of a certain class, in which the tubercular process has seemed to be in the lung, where they have previously run a slight temperature, and complained of being below par. In half a dozen instances I have removed the tonsils in such cases with most gratifying results, and with disappearance of the remaining nodule. There has been an improvement in the general health, and the patients were able to leave the sanatorium, and had continued restoration to health.

I also have had some experience in goiter cases, which has been very satisfactory in two cases. In two other cases it did not seem to have any effect on the goiter itself.

One point I would like to discuss, namely, the matter of office operations. The pendulum seems to swing very strongly toward hospitals at present. That has not been my experience. I think that at least half of the cases I operate in adults are done in my office, where I have very good facilities, under local anesthetics, B-eucain, with no untoward results. The patients do as well. Especially among people of moderate circumstances is this of benefit, be-

cause it saves the hospital fee, which has been quite an item to a good many of them. Young ladies working in stores at \$5 and \$10 a week are very appreciative. The time lost in a hospital is also of moment to these patients. My personal experience has been that there is no trouble with this practice at all.

I recommend eucain for the local anesthetic because operation may be begun immediately after injection. This lets some of the anesthetic fluid out—whatever might be absorbed in the length of time that you have to wait when using novocain and atropin.

DR. C. J. ADAMS, Kokomo: Dr. Ravdin made a mistake in the direct connection between the tonsillar glands and the apices of the lung. I understand that Loeb, in his recent book, said there was no direct lymphatic connection between the tonsil lymphatics and the lymphatics in the lung.

DR. RAVDIN (closing the discussion): I have nothing to add. My object was a good discussion, and I think you furnished it. There are a few points to which I shall refer, however.

First, as to Dr. Overman's statement regarding singers—that the voice has to be reeducated. This is the point Dr. Hudson Makuen makes, and in this connection he favors a tonsillectomy within the capsule. He leaves the capsule, thereby separating the pillars from each other. It is the fossa tonsillaris, and not the tonsil, that affects the voice. If the palatopharyngeus muscle adheres to the palatoglossus, you have contracture of the musculature and impairment of the voice, but so long as it is not contracted and adherent, and the musculature not interfered with, the patients will sing just as well after operation as before, so long as the capsule is left intact. Of course, they must sing in low registers for a while. This was threshed out before the American Laryngological Association last June, in Chicago, and most of the men agreed with Hudson Makuen that a tonsillectomy within the capsule should be done in singers.

As to the blood supply, I do not stop to think during an operation where the blood supply comes from. I want to stop the bleeding, and in a hurry. If all other means fail, we must ligate quickly. But the lymphatics of the tonsil I believe is of great importance—greater than the blood supply, because if we demonstrate that the tonsil has no direct connection with the cervical glands and with other lymphatics, then the whole theory of the tonsil as an atrium of infection is wrong, and we are slaughtering tonsils for nothing. But the latest literature that I have in German demonstrates the connection of the tonsils with the deep cervical glands, and again the deep cervical glands communicate with the lymphatic branches of the bronchial glands, forming a direct lymphatic connection with the apices of the lung.

CHRONIC SUPPURATIVE ETHMOIDITIS *

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Nasal catarrh as a diagnostic term has been relegated, together with rheumatism, jaundice and a host of other symptomatic designations, to the limbo of obsolete terminology.

Of the nasal discharges, suppurative ethmoiditis as the source stands near to if not at the head of the list. It may be acute, subacute, chronic or intermittent, primary or secondary, simple or complicated, focal, anterior, posterior or general, invade one or both sides of the nose, and in virulence vary from the mere annoyance of a slight discharge to a rapid foul inflammation highly destructive of both soft and hard tissues and may render the whole system profoundly septic, reaching it by way of the alimentary tract and directly by the lymphatics and blood stream.

The nature of the infection perhaps is nowhere else more widely varied. Faulty ventilation and drainage of the nose play important rôles in nearly all cases. Either the acute form is avoided where these factors are absent, or having occurred tends to self-limitation and easy recovery.

The diagnosis of chronic suppurative ethmoiditis to be effective must develop as far as possible the causative factors, nature and extent of the pathology and its bacteriology. Displaced and supernumerary cells, abnormal or unusual relationships of the cells to each other and to surrounding structures, and dehiscences in so far as possible, all depending largely on the skiagram, are integral parts of a working diagnosis. Extension of ethmoid cells beyond the capsule in the frontal, orbital, maxillary, sphenoid and middle turbinate structures are not uncommon in suppurative cases, and not only serve to continue the processes before operation, but may be the most important factors in determining the whole course of the case.

Transillumination gives some information, especially of the maxillary and to a lesser extent the frontal sinuses, but is not so dependable as well-interpreted skiagrams which perhaps should not be omitted in any case. Stereoscopic plates have served to improve the interpretations, and are of the most signal advantage in cases with circumscribed involvement. The simple processes of damming off the frontal discharge, and of cleaning around the bulla before

washing the antrum to develop its condition are too familiar to call for description. Also the pressing over of the middle turbinate to inspect or evacuate the sphenoid need only be mentioned. However, in case of superopostnasal suppuration we should not deem it beyond the confines of diagnostic obligation to remove, if necessary, part of the middle turbinate to disclose the source or sources of the discharge. The conditions of the associated sinuses must be developed, and a thorough study made of the ventilation and drainage of the nasal passages in a given case before we can have any adequate concept of the problem presented. Deviation of the septum, spurs, thickenings and angularities, turbinate abnormalities, polypi and disproportions in the lumina of the openings are all considerations passing through the cases from etiology to recovery or its failure.

Amid these points of importance the possibilities of syphilis, tuberculosis, though rare, and malignancy must not be forgotten.

Pain is a varying factor, often entirely absent locally and yet at times severe, with sensitiveness so exquisite that mere touching with soft moist cotton will excite most violent radiating spasmodic attacks of localized or general headaches.

The odors of chronic suppurative ethmoiditis are the result of many factors, and range from a mild sweetish breath of pus to some of the foulest and most penetrating emanations that literally permeate the atmosphere wherever the unfortunate goes. Subjectively they are not often marked, bearing no constant relation to that observed by others because they depend mostly on pressure, true olfaction having been destroyed.

The treatment of chronic suppurative ethmoiditis is essentially surgical, and this is divided into operative and postoperative. The choice between the intranasal and external routes of attacks usually is not difficult, though justifiably strong leaning toward the former occasionally renders the first effort unsuccessful. Little may be lost, however, for the second external operation is rendered shorter and less difficult, with a shortened convalescence.

Briefly stated, the intranasal operation is the one of choice when the pathology is limited to an ethmoid capsule which is confined to its regular bounds. Likewise when extensions or supernumerary cells are in the maxillary or turbinate structures, as also when a frontal extension is moderate, or is not beyond the frontal duct. When associated sinus involvements are in the maxillary and sphenoid cavities, and where a

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frontal complication is somewhat recent, one is justified in placing dependence on the intranasal attack. Septal and turbinal modifications manifestly come under this procedure.

Extension cells in the orbital region, or high placed frontal ones, and those in the lesser wing of the sphenoid are more surely reached through an extranasal opening. Likewise a very chronic frontal sinusitis with evidence of granulomata there is not likely to recover without such clearance and drainage as follows a Killian or one of its modifications.

For intranasal operations the writer much prefers local anesthesia, except it be in children under 12 years of age. The powdered cocain on adrenalized cotton gently and thoroughly rubbed over the surfaces three times in succession, preceded an hour beforehand in nervous individuals by a hypodermic of morphin and atropin, has sufficed uniformly and without untoward results. Where there is much tumefaction it is of use to inject into the cells a 4 per cent. solution of B. eucaïn. On a few occasions the hypodermic use of B. eucaïn at the three points, posterior end of middle turbinate, anterior end of same and at anterior nasal notch, has given good results. Dr. Greenfield Sluder's method of 90 per cent. cocain swab for fifteen minutes over Meckel's ganglion and for half the time at anterior nasal notch, needs no higher authority than himself to recommend it. For the extranasal operation a general anesthetic seems to be the best and is almost uniformly recommended and practiced. With it a thorough plugging of the posterior nares with projecting ligatures must be used.

Presuming familiarity with textbook descriptions of different operations, the writer begs leave to offer some suggestions on particular points and to emphasize certain features that his experience and observation have impressed on him as of major importance. First of these is that in some cases of profusely discharging suppurative ethmoiditis only a part of the anterior or posterior set of cells is involved, and that being determined there is opportunity for careful selective work with curette and cutting forceps to reach the pathology without complete destruction of a set of cells and thus to encompass a recovery for the patient better than by attacking the ethmoid *en masse*. This is more particularly true of the anterior set of cells, and while in some cases the cells emptying into the superior meatus may be successfully attacked without destruction of the anterior set, there is not the same assurance, for while the posterior wall of the bulla is the anterior wall

of a posterior cell it by no means marks uniformly the anterior limit of the posterior group. In view of the later superior comfort of the patient when a portion of the ethmoid is preserved, the removal of the hinder part of the middle turbinate, and using the Hajek hook, forceps and curet successfully, constitutes the acme of ethmoid finesse. The percentage of sphenoid involvement in suppuration of the posterior cells is high, almost 100 per cent., and manifestly no operation is complete without interrogating that sinus.

In cases with pus in the maxillary cavity it is to be decided whether it is acting as a reservoir or has an associated inflammation. Where there is room for serious doubt it is probably better to puncture and irrigate with iodine solution repeatedly, when in either event restitution may be satisfactory.

In suppurative ethmoiditis of the chronic type septal and turbinal abnormalities are of an importance which does not seem to have been adequately emphasized. Their baleful influences on the ventilation and drainage of the nose and its sinuses are frequently basic in causation of sinusitis, leading factors in chronicity and extension, and serve to thwart recovery of the patient after most careful and thorough exenteration of sinus pathology and most appropriate and painstaking after treatment. If space permitted and it were more needful a number of very interesting cases might be reported from my own practice and some from that of others where a protracted convalescence has been turned promptly into a recovery by a submucous resection, the removal of a seemingly unimportant spur, or amputation of the posterior segment from a lower turbinate the needs for which had seemed of no consequence.

Where a complete ethmoidectomy is demanded by the intranasal route the writer yet prefers the Ballenger angle knife. Mosher's operation leaves nothing to be desired but rapidity of execution, and that is supplied by the sweeping right-angle blades dexteriously used. In points of safety and thoroughness neither has any material advantage and mastery of technique requires equally thorough knowledge of anatomy, abundant observation and persistent studious practice.

Deliscences may be detected by the skiagram, but their entire absence cannot be absolutely assured, and therefore one should proceed in ways that would be the least likely to do harm if they are encountered. Some especial stress should be laid in operations subsequent to others. Secondary operations probably should

not be within six and certainly not within four weeks of the preceding one.

Care in removing shreds and fractured spiculae not only hastens convalescence, but gains additional assurance against troublesome hemorrhage. Dusting the surface with aristol or some similar powder near the close of the operation assists markedly in locating the residual tags for excision. A repetition of this powder or bismuth formic iodid or another of choice is one of the favorite final dressings. The writer's personal preference is for the Beck's bismuth paste used through a well-adapted syringe which has served to meet all the indications of an ideal dressing. It would be superfluous to write in further caution against packing except as a rarely needed dernier resort for the shortest possible time on account of hemorrhage.

After quietude in semirecumbent position in bed, with ice packs to the nose, is practically imperative for forty-eight hours after an extensive exenteration.

Operation on both sides may well be done at one sitting if there are no contraindications in patient's general health. Where resection of septum is needed it may be done with ethmoidectomy on one side, the former being done first and through the opposite naris, using special care to avoid rupture that would give access of infection to the intermembranous space.

With all possible care in operation and first dressings primary healing is rather rare and therefore more or less after treatment is necessary. This need not be disappointing when we consider that the tissues have so long been insulted with pus contact and poorly supplied with nutriment from an economy blighted by more or less sapremia, and that no lasting dressings may be applied to protect the raw surfaces and provide rest in time of recuperation. Irrigation in after-treatment is yet employed by some, and while it is no doubt conducive to temporary comfort, most observers agree that it tends to prolong convalescence. It is not unlikely that it serves to remove better agents for healing provided by Nature than it supplies. Cleansing daily with large cotton pledgets moist with 10 to 25 per cent. argyrol or 10 per cent. ichthyol in water or glycerin left in place for several minutes, as indicated by the moisture and tumefaction, followed with mild aseptic oil vapor, suffices best in a majority of cases. Occasionally touching flabby granulations with silver nitrate from 2 to 10 per cent., according to results needed, is of value, and where the whole surface presents an appearance of indolence a solution of the same

up to .5 per cent. may be used with a syringe at intervals of a few days.

Areas of granulomata and polypoid degeneration are most efficiently treated with punch forceps and snare which may be supplemented with fused chromic acid very delicately applied.

Continued pustular discharge, or a recurrent one, may denote tissue to be removed or calls for careful study of the mechanics of the ventilation and drainage problems of the passages as a whole. As before remarked, a seemingly unimportant irregularity may be deflecting the air currents in such a way as to cause dust deposits in regions where continuing irritation and repeated infection serve to minimize all other efforts. Likewise atrophy at some points may be having the same effects and a remoulding of the contour with paraffin injection may cause a prompt cessation of the pathology. Narrowed outer openings have been observed to prolong these cases, and a thinning of the columna or a corrective operation on the alae may supply sufficient lumen there to give equalized atmospheric pressure to the walls with its manifold benefits.

Vaccines have not given the satisfaction expected of them. Without operation no benefit whatever has been observed by the writer. Used after operation, results have seemed in large proportion to the norm approached in corrections. However, the problems of their preparation, uses and modes of action have only been attacked, and there may be in store for us brilliancy of results not yet within our reach.

All that has been said of treatment presupposes due regard for the patient's general health and such régime of therapeutics, including medication, diet, exercise in the open air, occupation and recreations as would suggest themselves in forming rational conceptions of such patients. Climatic and occupational influences are hard to determine. Some of the worst cases are found in most cleanly occupations in persons of refinement where sojourns in supposedly salubrious places have improved not at all or only temporarily. Rhinologists in all closely inhabited regions are having cases of chronic suppurative ethmoiditis applying for treatment.

However, in protracted convalescences, where the corrective measures have been exhausted, a vacation in a sparsely settled location, where the air is comparatively dry and free from dust, may serve quickly to terminate a residual discharge.

Patients pronounced recovered are not *restitutio ad prima*, and may expect the need of some extra care of their person and do well to seek prompt attention on the advent of recurrent nasal infection as common colds and the like.

Chronic suppurative ethmoiditis constitutes a very important class of cases in rhinologic practice and calls for the acme of skill, patience and thoroughness of work which with cooperation on the part of patients should result in recovery in practically all cases, and only in rare other conditions does that beget for the sufferer greater relief or for the attendant more of satisfaction and gratitude.

DISCUSSION

DR. JOSEPH D. HEITGER, Bedford: It is gratifying to hear Dr. Tomlin commend the removal of the middle turbinate when necessary to disclose the source of the discharge in purulent ethmoiditis. Every little while some one comes forward to champion the nonremoval of the middle turbinate, forgetting that in such cases as we are discussing this structure is so often not only itself diseased beyond hope of restitution to the normal, but also acts as a menace to the ventilation and drainage of the accessory sinuses, thereby inhibiting the function of the sinuses, the importance of which has recently been emphasized by Minz, in the *Archiv für Laryngologie und Rhinologie*.

Rest of the diseased part, ventilation and drainage constitute three great principles of surgery, and, in the nose, we obtain the first by the application of the latter two.

In regard to the symptomatology of suppurative ethmoiditis, I desire to lay particular stress on the fact that a diagnosis may be only disclosed by a careful rhinoscopic examination, as subjective symptoms may be conspicuous by their absence. This is especially true in one type which Dr. Tomlin has failed to mention, namely, the closed type. The difference between the open and closed types is very important in diagnosis and treatment. In the open variety the pus flows freely into the nasal fossa, whereas in the closed type the pus is enclosed and by pressure leads to dilatation and periosteal changes in the bony walls. To the closed type belong those tumor-like projections of the middle turbinate itself, or such projections in this region.

Hajek divides these into three main types:

1. Pus formation in a bullous-like middle turbinate, without any involvement of the rest of the ethmoid labyrinth.

2. Pus formation in the labyrinth which extends into the middle turbinate, and also pus formation in a concealed ethmoid cell.

3. Pus formation in the bulla ethmoidalis. The rhinoscopic picture presented in these three forms may be very much alike, especially where they reach a considerable size, the swelling in exceptional cases reaching such a magnitude that not only complete obstruction of the upper half of the nasal fossa of the same side occurs, but the septum may be pushed over, producing partial obstruction of the opposite side. In some of these cases we can make a precise diagnosis only after opening the swelling and removing its walls, and when in doubt we always can do an exploratory puncture, as in the maxillary antrum.

In these cases the inferior turbinate may be in a condition of hypertrophy or a high degree of atrophy, the latter at times giving the appearance of ozena, the secretion coming from the mucous membrane covering the ethmoid labyrinth, and not from the whole mucous membrane as in true ozena.

Associated with nasal accessory sinus disease we often find an enlargement of the blind spot, ring and central scotoma, red and green showing, as a rule, the largest, blue next, and white the smallest variation. Some authors (Birch-Hirschfeld) look on scotoma as an early symptom, while others (Hoeve) look on it as a late symptom. It is hard to determine whether in scotoma we have to deal with disease of the maculopapillary or peripapillary bundle. We may have an inflammation of the optic nerve fibers, a circulatory disturbance or a toxic effect.

One should, therefore, examine the visual field in all accessory sinus diseases, because the patient will never notice an early optic neuritis when the other eye sees well.

While Dr. Tomlin has outlined the indications for the intranasal and external methods of attacking the ethmoid labyrinth, the indications as given by Hajek appear to be more comprehensive. He recommends the intranasal method in all cases of chronic latent empyema of the ethmoid labyrinth, with or without extension of the same to the accessory sinuses, and equally whether the empyema is open or closed, except in those cases where extensively diseased infundibular cells and cells extending widely over the orbit are in evidence, in all acute empyemata when appearances indicate a threatening rupture into the orbit. In the latter case, however, should no drainage of the pus occur, with an amelioration of the symptoms, then the intranasal method must be exchanged for the external.

The external method is indicated in all cases of empyema of the ethmoid labyrinth which have already found a way to the outside, also in already developed orbital abscess, with or without fistula formation, and, further, in cases of suspicion of cerebral complications. In all

those chronic empyemata alone or combined with involvement of frontal and sphenoidal sinuses, in which the intranasal method is not sufficient and the persistent suppuration after drainage continues.

In regard to the operative methods in vogue, I have found the Mosher operation especially efficient where dilatation of the ethmoid capsule has occurred, giving more space for the use of the curet, and on account of the pathologic changes accompanying dilatation permitting of a readier attack and removal with the curet alone. Reeves has devised an ethmoid knife working on a set curve similar to the Ballenger knife, and also a small angular cutting forceps for the removal of the labyrinth *in toto*, which, in ordinary hands, seems safer than the Ballenger method.

In any case, however, one can depend on the Hajek hook, curet and punch forceps, the steps of the technic being guided by the anatomic variations in the ethmoid cells and the pathologic changes which they present.

In the after-treatment, I have little to add except to recommend the use of the Holmes nasopharyngoscope in inspecting your cases during convalescence, and the daily use of a negative pressure of 16 to 18 mm. of mercury as controlled by the Horn apparatus. Openings close concentrically, as a rule, and the accumulation of secretion at the lowest part of a cavity, just inside the opening, has a tendency to pile up granulation tissue here more rapidly. By daily suction this secretion is drawn out and the tendency to irritation avoided.

Cases sometimes do not completely clear up because of other foci of infection. During the past year I have had two cases of chronic pansinusitis operated by the intranasal method, which were stubborn and did not clear up entirely until the tonsils were removed in one case and pyorrhea corrected in the other.

In addition to the correction of septum involvements, which the essayist has mentioned, permit me to call your attention to a type of nasal obstruction caused by enlargement of the lumen vestibuli, described by Grünwald.

While the extent of purulent ethmoiditis is often hard to diagnose and treat, it should not offer great difficulties to him who controls his examination and operative methods and carries them out with patience and perseverance.

DR. GEORGE W. SPOHN, Elkhart: I would like to ask a few questions. First, what percentage of the members of the section are removing the ethmoids *in toto* in these chronic cases? I find Ballenger is very radical. Of course, we all know that years ago we thought it was very radical when he advocated the complete removal of the ethmoids in an ordinary chronic case. I wish the discussants would state whether they

frequently remove them entirely. I find in even a great many chronic cases of ethmoiditis that the cells are not all involved. Now, should we, if we go in there with the Ballenger knife (as I have done a few times) remove a great many cells that are not diseased? I cannot see how you can go in there and remove a portion of them unless you remove all of them. Since that time I have rather abandoned the Ballenger knife, and have been using the forceps and various instruments, curets, etc., instead of using the knife for their removal.

As to the etiology of this disease, as of all sinus diseases: I believe that they are largely due to a deviation of the septum. Perhaps I am wrong, but if we will stop to think, we have the various openings from the sinuses leading to the nose. When the septum is in a normal condition, it is very seldom that we find any sinus disease, but just as soon as it is turned to the right or the left, the apertures to the sinuses are thrown out of line. The various sinuses are immediately occluded, especially the ethmoids. The worse the deviation, the worse the disease. That seems to me to be the point above all others that requires consideration when studying the etiology of these conditions—at least, that has been my experience.

Now, as to dressing: I notice that the essayist mentioned irrigations, powders and various things. We all know that no one can blow out the excretions from the ethmoids, and if they are allowed to go two, three, four, five or six days without dressing I find that there is a great deal of infection there from the crusts that should have been removed before. Perhaps I am wrong. I have adopted the method that was suggested by Freer of Chicago a number of years ago. I have been irrigating a great deal with common boric solution. I do not know whether I am right or wrong, but I have had much better results since doing that than when I would try to clean the ethmoid region myself with applicators. It is not necessary for the patients to return to the office so frequently. I take nothing more than a common water bag, which is sterilized, and nothing but a common No. 8 or 9 soft rubber catheter, cut a few holes in it, cut the end off, and put that in the nose and irrigate five or six times a day, if necessary. I have much better results than when I used powders or made applications of argyrol or iodine preparations.

DR. D. W. STEVENSON, Richmond: Dr. Tomlin mentioned the fact of doing several operations in the nose at one time. I would advise strongly against doing an ethmoid operation and a submucous resection at the same time. It is far better to wait a month. Nature can take care of a small wound, but not of a great number of

wounds, near the brain. I believe we ought to use every method at our disposal to do these operations in a hospital, under the strictest aseptic precautions.

In regard to the question asked about the complete exenteration of the ethmoid and the instruments used, Ballenger really has two instruments. His large one, I think, is barbarous. His simple knife for uncovering the roof is an excellent instrument, and I think we have better methods of removing only ethmoids than the large instrument, which attempts to take the whole piece out at one motion, although he describes three motions for the instrument.

DR. GEORGE F. KEIPER, Lafayette: One point in diagnosis, with reference to these cases, namely, in finding the enlargement of the blind spot, to which Dr. Heitger has called attention. The ordinary perimeter will not show you that enlargement, and so it is necessary to resort to some other means. I know of no better device than the large black cloth on the screen on the wall, and the patient sitting at a considerable distance from the screen. In that way you get the enlargement. This is a very nice point in diagnosis in these cases.

DR. JOHN F. BARNHILL, Indianapolis: I am of the opinion that no more important paper will or could come before us. I look on the ethmoid as one of the most complicated pieces of anatomy in the human system. If you stop to think for a moment as to where it lies, you will agree with me. Consider its environment: The brain infinitely close above; the eye almost infinitely close externally; the nose internally, with all its suppurating cavities emptying near by; the interior of this capsule filled with two sets of large cells; these cells frequently abnormally extending up into the frontal sinus, or posteriorly and overhanging, as they frequently do, the sphenoidal sinus, or involving, as they also frequently do, the optic nerve. Take all of these things into consideration, and we have a complication such as exists nowhere else, to my knowledge.

It has been mentioned this morning that the eye is frequently involved, sometimes trivially, sometimes seriously. It has been my pleasure to dissect many ethmoids in the skull and in the cadaver. I have found many curious things in these dissections. One of these skulls I have in my possession, in which the optic nerve runs through a channel on the floor of one of these large posterior ethmoidal cells for a distance of three-quarters of an inch. It is encased in thin bone, but there it lies. Should somebody have attempted to exenterate that posterior ethmoidal cell, he would undoubtedly have created blindness on that side, as an unavoidable part of his operation.

We are dealing with a dangerous territory when we completely exenterate ethmoidal cells. I do not mean by saying that we must not deal radically with these ethmoidal cells, because we must, if we mean to cure the case. It is, I believe, our absolute duty to know as much about the anatomy, however, of these cells as it is possible for us to know before we attempt this kind of surgery. I look on it as the most difficult of all surgery. Not difficult to go in and do something, but difficult to go in and do the right thing.

There is a word in our English language which is more misused by throat and ear specialists than any other word that I know of. It is the word "thoroughly." Read any paper that you please. I am glad to say that Dr. Tomlin did not use the word at all this morning. But the average individual who discusses or reads a paper on ethmoid disease nearly always uses the word thoroughly. He goes in and "thoroughly" exenterates the ethmoid bone. If you will take a cadaver and try to thoroughly exenterate the ethmoid bone and dissect it afterward and see how thoroughly you did it, you will be astonished. After that you will not use the word thoroughly as often as you have before. When you exenterate the ethmoid capsule thoroughly, you have done one of the most delicate and difficult operations that I know anything about. You do not want to take out the whole bone. You leave the *os planum*, at least, in its place, and its roof, but you do want to get all of the cells.

Dr. Spohn has asked how thoroughly should we do that. As thoroughly as we can, if there is necessity for it, in my opinion.

DR. SPOHN: Can you remove all the diseased portion?

DR. BARNHILL: Do it as thoroughly as you can, any way. First, you must select the instrument you wish to use. Examine your patient carefully. The Ballenger knife, in my opinion, has a very useful place. You find many ethmoids that are so degenerated that they are cheesy, and when so degenerated I know of no instrument so valuable as the crooked knife of Ballenger that you condemn. If the bone is reasonably hard—if not so degenerated—not polypoid in degeneration, I very much prefer the plan of Mosher. I believe it is safer and better in every way.

In regard to other operations at the time or before, Dr. Stevenson says that he would not do a submucous resection in a case that has an ethmoid suppuration. I believe it is entirely possible to do a good and safe operation, provided you sterilize as best you may the nasal cavity, pack it off from your submucous operation, do your submucous through a comparatively small opening, and it is entirely possible

for you, in a hospital, to protect that operation from any danger of infection. I do it over and over, and have had no trouble of any kind. I can readily see how such precautions should always be taken, and I think that Dr. Stevenson's suggestion, at least, is a good one to be followed.

There is one other point that I want to mention, and that is the point as to whether the external operation or the internal operation should be done. It is important, generally, to know and study the case, and determine whether the one or the other should be done. The essayist very beautifully said that even if you do do the internal operation, it is a part and a very excellent part, of your external operation, when the time comes to do it. So that you have not made any serious mistake. If you believe that you can cure your patient by the internal operation, by no means do the external operation, but in all of these chronic cases that I have seen and studied carefully, we have found that the mucous membrane is diseased, and also that the mucous membrane of the frontal sinus, which almost certainly is diseased, has to be taken into consideration also. If diseased, the external operation ought by no means to be done in these cases, in my judgment. I think, as surgeons, we too often work under cover. We do it about the larynx, about the ear when we can, and we do it about the sinuses when we can. We work in the dark. We ought to take the cue from the general surgeon and work in the open, and the more sinuses you open externally and see the condition of the mucous membrane, the more you will do in the future, because you will find that it is the true surgical way of curing the very chronic cases.

DR. TOMLIN (closing the discussion): I am particularly gratified, and want to thank the members of the society for the spirit in which my paper has been received and the liberal discussion. I wish to thank Dr. Heitger especially for his very thorough and painstaking study of the subject.

Just a few words in connection with some of the points that have been raised:

First, as to total exenteration. My position has been well expressed by Dr. Barnhill. I attempt to know the pathology and try to limit myself to the pathology, realizing that the ultimate recovery of the patient as much depends on the conditions in which you leave the tissues as on the taking out of all of the diseased structures.

As to the making of two or three operations at one time, I have not experienced any difficulty in connection with it. I make the submucous resection carefully through a small opening, operating the ethmoids through the other nostril and more laterally. I have felt a

little safer since reading some recommendations made by Milligan of London, in a meeting of the British Association, on White-head varnish, the formula for which is given, and which will seal up your submucous operation when finished. In doing that I latterly have not used any splints or packing whatever in submucous resection, and I think my results have been very much more satisfactory, and a great deal more comfortable to the patient, especially for the first few days.

Without undertaking to make any additional argument in connection with the Ballenger double-angled knife, I have found that it so shortens the operation, especially when you are exenterating on both sides, and makes it so much more to the patient's advantage, that I have not been able to see where there was any particular danger in using it. I have observed, in the more recent studies of men, such as Skillern, that those who usually condemned it six or eight years ago are now most heartily recommending the use of this knife.

THE BLOOD-CLOT DRESSING IN SIMPLE MASTOID ABSCESS *

K. K. WHEELOCK, M.D.
FORT WAYNE

This paper is based on my experience in thirteen consecutive operations for simple acute mastoid abscess in which I have closed the wound primarily, employing the coagulated blood as a dressing for the dead spaces in the exenterated mastoid. These thirteen cases had a necessary detention in the hospital of ninety days. This would show an average of approximately seven days for each case, and, to be absolutely specific, all left the hospital at the end of seven days except one, and she left on the sixth day. This patient developed a mild attack of erysipelas on the fourth day but the mastoid wound was not invaded. Psychic conditions peculiar to the patient made it better for her to go home and I made but three or four visits to her after her departure from the hospital. The mastoid wound did not make the visits necessary, because the wound had healed with a linear scar with two points of stitch abscess. Another case of a young woman with a nursing baby developed a double mastoid abscess with suppuration from both ears. Her mastoids were exenterated and closed with catgut sutures over a blood-clot dressing. She left

* Presented before the Eye, Ear, Nose and Throat Section of the Indiana State Medical Association, at the Indianapolis session, September, 1915.

the hospital on the seventh day, returning to her home in the country 20 miles distant, and I saw her twice afterward. The left skin wound opened for one half of a linear inch and for the depth of the skin. This closed under a scab and was dressed a few times by the family doctor who applied a pad held in place by rubber plaster.

It has required nine years for me to arrive at a conclusion concerning the value of the blood-clot dressing, which should have been immediate if tradition rather than reason coupled with knowledge had not guided my way. And I can assure you it was necessity which brought me the courage to try the blood-clot dressing in a modified form in the first instance. I had operated a child $2\frac{1}{2}$ years old for acute mastoid abscess following scarlatina and the father would not leave the child, who was very nervous. I concluded on the second day that I would withdraw the small roller gauze drain, close the wound with a sterile pad and send the child home. Further dressing or manipulation seemed out of the question and I made a virtue of necessity and left the wound dressed. Each day the dressing was inspected and it seemed to be satisfactory and I left it in place. In ten days the wound was quite solidly healed. I began to think it feasible to close the mastoid wound with a blood clot for a framework.

My next case was a young girl of 15 years who was convalescing from an attack of typhoid fever in the course of which she developed a mastoid abscess. She was weak, nervous and apprehensive of pain. The wound was closed with catgut suture over a blood clot, and in seven days the wound was solidly healed and she could have left the hospital so far as the ear was concerned. Her physicians, Drs. George McCaskey and Miles F. Porter, Jr., kept her in the hospital till a large bed sore, which had developed previous to her coming to the hospital, had healed.

Since that I have closed all wounds over the blood clot in simple acute mastoid abscess, with the astonishing result of an average hospital attendance of seven days. In the face of my experience it would seem fair to give the method a trial, yet such is the force of custom and habit that even an ocular demonstration is not sufficient, as I was made aware in my experience with one of my colleagues last winter. In the case of a young woman 24 years old in whose case I was called in consultation and requested to operate, I asked the doctor if he had had any experience with the blood-clot dressing

and he said that he had not. I explained the method in detail, and when I opened the mastoid we found the sinus and dura exposed. He said, "You would not use the blood-clot dressing in this case, would you?" I told him I had used the blood-clot dressing in cases with much larger exposure of the dura and sinus with perfect success and would use it in that case. He expressed astonishment at the short time required for healing and the short stay of the patient in the hospital.

I am aware that many of our best surgeons do not use the method I am advocating or have used it and put it aside. You all know that the use of the blood clot for closing dead spaces in bone is an old procedure and founded on perfectly scientific data. This method of closing the mastoid wound was first proposed by Dr. F. B. Sprague of Providence, R. I., and put into practice by Dr. Clarence John Blake of Boston. Twenty-five years ago Dr. Blake began his experiments with the patient's blood as a framework for closing and reconstructing the bone in a mastoid wound and he has written largely and enthusiastically on his results. I heard his paper, "The Value of the Blood Clot as a Primary Dressing in Mastoid Operations," read at the Toronto meeting of the British Medical Association in 1906, and I dismissed the consideration of it with the thought that the method was a fad and a dangerous one. But now, with results which have added so much to the comfort of my patients, which have so shortened the time of detention in the hospital, which have left only a fine line in a rounded mastoid contour, I feel that I want to excite your enthusiasm to an equal pitch with mine and to the end that we may use the blood-clot dressing as the safe and conservative dressing for the closure of the exenterated mastoid in cases of acute abscess of this bone.

I have nothing to add to the operation either in the way of technic or physiologic knowledge of the blood as a natural germicide and physical framework for the growth of osteoblasts. It must, however, be insisted that the surgical operation be a complete one, both within the exenterated cavity and on the overlying soft parts. Every vestige of softened bone must be removed without consideration of the extent of the removal or the parts involved. If necessary we must go to the dura within and to the skin without. Every bleeding part in the osseous cavity must be regarded as a source of possible subsequent infection and removed by the cure. After the mastoid cavity has been made clean

from the tip to the bottom of the antrum, a free incision is made in the drum high up, and a piece of rolled gauze inserted down to the incision in the drum, after the canal has been made clean with alcohol, ether and hot sterile. normal salt or alkaline solution. I use no fluids or chemicals, such as bichlorid, in the mastoid cavity, nor any preparations which would lessen the germicidal powers of the blood clot which is to be subsequently used. Sterilization of the skin is secured by painting the skin surface with a 2 per cent. solution of iodine, the external ear and the hair line, as well, for an inch within its border. The hair is not shaved or disturbed in any manner. This, however, is a matter of individual interpretation.

After considering the results following the use of the blood clot in closing the dead spaces in the operation for acute mastoid abscess, we find them superior to the results obtained in the usual method of packing with gauze and securing the closure of the wound by granulation. The results are better in three particulars and they comprise about all that goes to make up good surgery, namely, rapid healing, no pain to patient in dressing the wound and no deformity. I am recounting my successes. I have had no failures. Yet I am not insensible of the fact that others have had failures and they have been such as to lead them to abandon the method. I do not presume that their failures have been due to bad technic, because they are masters in their special work. At the Seventeenth International Congress of Medicine held in London in 1913, Professor Mygind of Copenhagen read a paper on "Secondary Suture After Simple Resection of the Mastoid." He said: "There is no doubt that there are many drawbacks attached to the ordinary after-treatment of simple resection of the mastoid process for acute osteitis by the filling up of the osseous cavity with granulation. The chief of these drawbacks is that the healing process is lengthy, taking generally from six to twelve weeks. Thus the average duration of the cases not complicated with cerebral abscess, sinus thrombosis or meningitis treated at the Ear and Throat Department of the Copenhagen Commune Hospital is about seventy-four days. It would, therefore, seem reasonable to suppose the various efforts made to abbreviate and simplify this after-treatment would have been received with interest, and also that surgeons who had been successful in their attempts would have found followers. This, however, has not been the case, and two methods which in particular mark a distinct progress

have not gained the recognition they deserve. I refer to the use of primary suture after filling up the cavity in the bone with blood clot as first suggested by Frank B. Sprague of Providence, U. S. A., and first performed by Clarence Blake of Boston in 1906. . . . I have for some years, in a number of cases which are suitable for such treatment, used primary suture, and have obtained primary healing."

I perhaps may explain that these remarks are preliminary to Mygind's description of the use of the blood clot in closing the mastoid wound in from eight to twenty days after doing the resection primarily and using gauze packing. As a matter of fact, I do not see that Professor Mygind's operation for secondary suture differs in any essential, from the method which I employ for primary closure. He opens the wound and scrapes out all soft granulation tissue, freshens the edges of the wound and then allows it to fill with blood which he allows to coagulate. Under this method the aditus to the antrum is closed off and reduces to the minimum the danger of this avenue for infection of the blood clot. I wish to refer again to Professor Mygind's paper and quote: "The following figures will show the extent to which this method abbreviates the after-treatment of resection of the mastoid process. As I have already mentioned, seventy-four days is the average time at the Copenhagen Commune Hospital's Ear and Throat Department for closing the cavity in the mastoid process with the usual treatment, while the corresponding figures for cases of secondary suture which healed, practically speaking, *per prima* was only twenty days."

We must not forget that there is a marked difference in the recuperative power between patients who attend a public clinic and those who come to your private office, and the difference is in favor of the private patient.

Some who have not followed the experiments on the blood and are not familiar with the fresh blood as a natural germicide, will be led, at first blush, to regard the blood as a first class culture medium for the development of micro-organisms and feel that they are locking up in an infected cavity all the elements for a first class case of suppuration. Such, however, is not the case.

Dr. H. O. Reik of Johns Hopkins University, has been an enthusiastic investigator in the use of the blood-clot dressing, and, that I may get him squarely on record, I will quote from his article: "The Blood-Clot Dressing in Mastoidec-tomy, Considered Physiologically," printed in

The Journal of the American Medical Association, March 31, 1906. "If a mastoid wound be dressed with sterile or antiseptic packing at the time of the operation, the period of healing will vary from three weeks to several months. Very rarely will complete closure occur in less time, and I have frequently seen cases that required dressing over a period of six months." I wish to quote a little further from this paper: "The primary object of this dressing is to obtain healing of the wound by first intention, but when this occurs other advantages accrue: for instance, the normal contour of the mastoid process is restored, the resulting scar is a mere line, and the period of healing is reduced to five or seven days, with practically no after-treatment. No deformity, almost no scar, and primary union constitute on the whole a stake worth playing for. On the other hand, in cases in which the blood clot fails to organize, there is no additional risk to the patient. . . . the wound may be dressed and packed in the usual way."

Many investigators in the realm of physiology have come to the same conclusion in regard to the germicidal properties of the blood. Metchnikoff, Nuttall, Fodor, Vaughn and Novy have published their findings. From their experiments we may draw the following conclusions: The normal human blood possesses, in varying degree, bactericidal powers; this power is greater in drawn blood than in blood circulating in the vessels; the microbe-destroying substance is found in the serum but is resident in the leukocytes; the germicidal power of the blood diminishes after forty-eight hours and is soon lost altogether. If 16,000 germs were injected into an animal the animal still lived, whereas if more than 16,000 were injected the animal died. If 16,000 of the same germs were placed in 1 c.c. of blood drawn from the animal, all the germs were destroyed in a few minutes and after a few minutes more no germs could be reproduced from the clot.

Vaughan and McClintock showed to their own satisfaction that the leukocytes produced a proteid which has the power of destroying germs, and that the proteid is attributed to nuclein. I do not wish to do more than recall to your mind the results of the physiologic experiments on which the germicidal property of the blood rests.

A principle to have universal application should always work in the same way. But a principle which fails in its application may fail because of technic or because the premises may

be perfect in one case and not in another. I cannot do better, in closing this paper, than to quote from Blake's paper referred to above and read at the Toronto meeting of the British Medical Association in 1906.

"That the blood clot is not an inert filling material merely, but has in its serum a protective defense viable for at least forty-eight hours after the formation of the clot, and its clot a repair material capable of effecting closure of the antral and the surgically produced cortical openings and of traversing the unified mastoid space.

"That the use of the blood clot completely filling a carefully exenterated mastoid cavity, results, when it persists, in healing by first intention in a varying percentage of cases.

"That the persistence of the blood clot during the period of its protective viability only, even though it then breaks down and comes away entirely, results in the formation of foundation granulomata, which are a basis for subsequent repair with speedier and more satisfactory results in healing than are obtainable when the wound is dry packed from the beginning.

"That the only cases to which the blood-clot dressing are inapplicable, are those in which on account of pyogenic invasion of surrounding structures it is desirable to keep the mastoid cavity open as a path of access and those in which a systemic condition of the patient, or the extent of the local infection do not warrant the expectation of speedy repair. . . ."

Some will say that the principle of the blood clot is bad surgery. If bad surgery produces such brilliant results, let us have more bad surgery, for in the final analysis results are what count.

DISCUSSION

DR. J. O. STILLSON, Indianapolis: Personally, I have had no experience with the blood-clot method of dressing, but as the essayist said in his final sentence, what we are after is results. Results are what count. In those chronic cases, where there is not any particular desire to hurry healing, and where it would probably break out again if healing were induced *per prima*, it is entirely feasible that such a method would not be the best. The open method in that type of case would be better. I think that the success in almost any operation of this kind is largely due to the personality of the operator and conditions at the time. In other words, the rule holds good here that holds good in surgery any where: Each case is a law unto itself. Every case has its own problems, and in acute cases, where it is desirable to shorten the treatment, where there

is no necrosis of the bone, where the symptoms all point to an acute exacerbation or an acute origin of the affection, we like to get healing by first intention. I am fully prepared to accept the proposition as laid down by the author of the paper, that the blood itself is not *per se* a culture medium for germs, and that if the blood had no germs, the clot would have none. Of course, I do not think that the process would be entirely satisfactory if the patient were in a long siege of sickness, due to bacterial invasion, and in that case I dare say the author himself would not favor such a method.

DR. L. C. CLINE, Indianapolis: I have had no experience with the blood-clot method, but I have had some experience with a method perhaps as new to some of you. It was derived from a dentist, in the study of packing dental cavities and openings made into the roots of teeth. Gold and tin foil were the first dressings. After the wound is thoroughly cleaned and ready for the dressing, I take a piece of tin foil, which I get at the dental depots, and gently fit it into the cavity. Then I use any packing I wish, gauze, or wool, or cotton, or anything else to fill up. This packing will come out without pain and very easily on the first removal. I usually leave it in for thirty-six to forty-eight hours, or longer, if necessary, according to the necessities of the case.

DR. W. A. HOLLIS, Hartford City: I cannot discuss this paper from the standpoint of one who has done a great many mastoid operations, or from the standpoint of one who has access to the free clinics and the poorer classes, for my practice is entirely private. I will say, too, that the community in which I practice has been blessed in having physicians who recognize the importance and the necessity of early incision and drainage in middle-ear complications. We therefore do not have very many mastoid complications; that is, cases that come to the point of operation. I think it is largely due to the activity of physicians in the early treatment. However, when they do come, I must take care of them.

Very recently I had a case of acute mastoiditis, simple, in which it was advisable not to wait until morning to operate. On operation, we found a fistulous opening down to the tip. All that was necessary was to remove the outer shell and then, by scooping every cell out, the whole diseased condition was removed. After every cell was removed, without using any antiseptics whatever, using entirely dry mopping, the wound was allowed to fill with the blood clot and then closed. A small wick was put in the lower part for drainage. The dressing was afterward taken care of merely by the moist boric acid, glycerin and alcohol dressings. The patient was removed to her home in five days,

accompanied by a nurse, who left on the seventh day. The little girl, 10 years old, came to the office on the seventh day. The stitches were removed on the tenth day, and there is absolutely no deformity. There is nothing but the line of incision. I feel highly gratified with the result obtained in this blood-clot operation, and I shall continue to use it as other cases present themselves, until there is a contraindication.

It seems to me that it would be a very simple procedure, in case this clot should become infected, to clean it out and pack it in the usual way, and if you have the good fortune to get primary union without infection it seems to me that it saves a great deal of suffering and annoyance to the patient. So I am well pleased with this result. I forgot to mention that the child has normal hearing.

DR. WILLIAM S. TOMLIN, Indianapolis: I would like to mention some points in connection with the preparation of the wound for the blood clot, namely, the Neumann preparation, which I have found to be very satisfactory. After a thorough curetting and cleaning out of all the places of infection, so far as possible, the wound should be washed with 50 per cent. alcohol. After that is used, a bicarbonate of soda solution, 2 per cent., is used to produce a thorough alkalinity of the wound, and then scarification made, if necessary, to fill with the blood clot, and I think that the ideal conditions for ultimate recovery are then present.

DR. A. E. BULSON, JR., Fort Wayne: Dr. Wheelock is to be congratulated on having had some excellent results with the blood-clot dressing in mastoid operations. I am very glad that he has brought this subject to our attention, because the enthusiasm concerning blood-clot dressing seems to have quieted down during the past few years. The strange feature to me is that after having been used and advocated by a few prominent operators for nearly fifteen years, blood-clot dressing of mastoid wounds is not more popular. About the time that Blake and Reik were writing on the subject some ten or twelve years ago, I tried the method. The first time it was so satisfactory that I thought it an ideal way of handling acute cases. The second case nearly died from infection of the blood clot and rapid development of general toxic disturbance. My third case resulted in failure and necessity for drainage and open dressing. About that time I thought I would consult some of my confrères and learn something about their experiences. I talked to men in New York, Chicago and different places, as occasion permitted, and I found that their experiences had been very similar to mine—that some of the cases were very satisfactory, but that all too frequently infections occurred and that, in their judgment, it was a rather dangerous proposition.

It makes a good deal of difference what the character of the infection is with which we are dealing. With a mild infection it is quite possible for the blood-clot dressing to act very, very satisfactorily. Given a virulent infection, I doubt whether it is possible for you to use the blood clot dressing, *as a general routine*, and have the cases turn out well.

Another feature should be considered, as pointed out by Dr. Stillson, and that is the technique of the operator. I grant you that the average mastoid operator does *not* clean out all of the infective areas. We say we do and I think I am as thorough as the average operator, but we not infrequently leave little pockets of infection which may be closed in with the blood-clot dressing. If we could be sure that we had gotten rid of all the infection, it is quite possible that the blood-clot dressing would prove satisfactory and the ideal method to be adopted. But the striking feature concerning this question is that after having been lauded, as it was years ago, the blood-clot dressing is not more generally used by our more experienced operators all over this country. However, the method may be condemned unjustly, and profiting by Dr. Wheelock's advice I shall give it another trial.

DR. JOHN F. BARNHILL, Indianapolis: My experience in the beginning was exactly the same as Dr. Bulson's. I had failures and successes. The failures were abominable and the successes brilliant. I tried to figure out what was the matter. I never did find out. There is much in it, and the thing that is in it is what has been said by the last speaker. If it is possible to clear the wound absolutely free from infection, in the mild cases at least, the blood-clot dressing and complete closure is a beautiful and scientific operation. In the streptococcic infections, and where the wound must necessarily be very large, because the cells are very extensive, it is hazardous in a certain percentage of cases, and you cannot always tell beforehand. I use the modified blood-clot dressing in the acute cases, in nearly all cases now operated. It shortens the process of healing several weeks, as a rule, the average in my last 100 cases being something perhaps between two and three weeks. By the modified blood-clot dressing, I mean putting in a small cigarette drain to carry away any infection that may be in the center of the clot. The outside or periphery of the clot in nearly all cases organizes and fills in rapidly, very greatly to the satisfaction of all concerned in those cases which I have had.

DR. WHEELOCK (closing the discussion): I am glad to hear of the experience of others with the blood-clot dressing. I hope you will not ask me to abandon blood-clot dressing, because with my experience and the satisfactory results I have had I certainly feel that I owe it to myself

and to my patients to continue using it. No one can tell when the pendulum in surgery is going to swing the other way. We may go along for a long time doing operations satisfactorily, and all at once, for no known reason, or for no accountable reason, the tide may turn against us, and our results will be disastrous. I do not know when the avenging Nemesis may overtake me, but until it does I shall certainly pursue the method advocated in my paper, irrespective of what we think ought to happen in these cases. There is always a golden mean about any procedure, and we must find that golden mean and follow it. If medicine or surgery were an exact science, we would all be equal, but there is a very large personal equation, and that is where the art of medicine and surgery comes in, and that is why one man is an artist and the other man simply a dub; why one man is known the world over for his efficiency, and the other man is not known at all. It is the personal equation in our work that makes us good, bad and indifferent, and, as I said before, until we arrive at a scientific basis for all of our surgical and medical work, we must still pursue it with the best light that we may have, and our successes will be greater or less, according as the detail of our work is to our personal liking.

Dr. Tomlin was speaking of the Neumann method as being founded on physiologic knowledge, namely, that the germicidal power of the blood is increased by an alkaline field. As a matter of fact, in using the blood-clot dressing, putting the patient on an alkaline medication for a few days before the operation, in order to heighten the germicidal property of the blood, and, following that, the use of a hot sterile alkaline solution in the field of operation, adds materially to the germicidal power of the organized clot.

VASCULAR HYPERTENSION IN EYE, EAR, NOSE AND THROAT DISEASES

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The ophthalmologist is frequently the first to discover the ill effects of increased vascular tension, manifested in various ways; for instance, in retinal hemorrhage, or in retinitis, both of which so often accompany the various forms of nephritis, especially the interstitial form, which often escapes the notice of the general practitioner as well as the patient until far advanced. The otologist often discovers increased vascular tension in his search for the cause of tinnitus and lowered or confused hearing or vertigo. The rhinologist finds it a frequent cause of obstinate

nasal hemorrhage, engorged turbinates and a disturbing factor in many cases of catarrh. The laryngologist finds it to be a prominent etiologic factor in obscure cough, hoarseness, and slight edema, with only slight inflammatory reaction.

Note that I speak of increased blood pressure as a symptom or manifestation of disease and not as a disease. However, it sometimes seems absolutely necessary to treat or relieve increased vascular tension in order to successfully cope with the original disease.

The specific cause of increased vascular tension seems to be some form of toxemia; however, cardiac hypertrophy or vascular sclerosis may be secondary causes. Temporary or transient increase in tension is not likely to be specially harmful, unless there is vascular sclerosis, in which case the danger will be in proportion to the amount of increase of tension and length of duration. We usually find hypertension in patients who are past middle life and have vascular degeneration, and are sometimes confused in determining which is the cause and which is the result. In searching for the cause of arteriosclerosis we find no specific toxin, but we believe that in each there must be one or more toxins in the circulation to which we attribute the disease. Hence the toxins of syphilis, gout, rheumatism, alcoholism, tobacco, typhoid, or any very toxic disease may produce vascular sclerosis, the pathology of which consists in the disturbance of nutrition of the vascular walls, beginning in the Vasovasorum which are quickly blocked and obliterated, after which the vessel walls are thickened and hardened, losing their elasticity and easily broken, allowing extravasation of blood into the tissues, and if per chance it be in the retina the wreckage will be great. Atheroma is most common and most damaging to the arterioles. I would call attention to a class of patients who are very prone to have atheroma, namely, those who are overfed and have overmuch mental work and too little physical exercise; those who carry heavy responsibilities, especially if inclined to fret and worry about affairs. All such patients should have frequent pressure records made.

Then why is the vascular tension increased in the various toxemias? Various authorities, among them Sajous, believes that almost all poisons in the blood stimulate the adrenal system, the effect of which is vascular contraction. However, the reverse of this is true in violent acute poisoning, such as snake bites, where the blood pressure goes extremely low as a result of adrenal paralysis. The toxins may be exogenous, as from typhoid, malaria, syphilis, etc., or

they may be endogenous, as from perverted metabolism, or from imperfect elimination of metabolic debris, or what might be termed the by-products of metabolism.

Some of the effects of high blood pressure are, slowed circulation, poor elimination, hypertrophy and finally dilation of the cardiovascular system, with vascular sclerosis. These vascular changes naturally give rise to various hemorrhages. Also hemic transudates, and inflammatory exudates are forced into the cellular tissues and cannot get back, because the way is upstream, so to speak, the normal relation between intravascular and extravascular pressure being disturbed.

The combined effects of high pressure are very damaging to the delicate tissues of the special sense organs and render very perplexing the problems connected with such diseases as uveitis, glaucoma, iritis, sympathetic ophthalmia, labyrinthine disease, obstructive middle-ear disease, laryngitis, etc., because free drainage of tissue debris, and a supply of good fresh blood are essential to normal metabolism and tissue repair.

Hypertension is often an early symptom of nutritional imbalance when there is no real disease present, being manifested by such symptoms as vertigo, headache, muscular pains, neuralgia, etc.

The writer has come to believe that blood-pressure record is more important than temperature record in patients past middle life.

Remedies for increased vascular tension are usually efficient and satisfactory except in cases of extreme sclerosis with nephritis. In cases where the kidneys are blocked and the skin and liver are inactive, it is necessary to reduce the intake of food and fluid until we reestablish nutritional balance. Toxins being the cause of hypertension, we must stop their production, and force their elimination. Of the long list of eliminants, the writer has chosen about six for their general utility and reliability, namely, mercury, salines, salts, potassium iodid, water, digitalis and pilocarpin. In most cases a narrow limitation of the protein foods is absolutely imperative, always supplying plenty of pure water for external use as well as internally, providing the kidneys are able to help in the elimination. Chloral and veratrum viride are choice remedies with which to relax the arterioles and flush the skin. May we keep in mind the importance of healthy lymph vessels and an unimpeded lymph stream, and that if the blood tension is too high, the lymph stream is impeded; therefore the two circulatory systems are incoordi-

nated; and yet it is the lymph glands and channels which we depend on most to carry out toxins and tissue débris. This is important especially to the eye and ear surgeons, because of the delicacy of the organs involved.

It is not the object of the writer to proclaim some new thing, but to hark back to important fundamental physics in the treatment of eye and ear diseases, as I believe that there is a tendency oftentimes among eye and ear surgeons to be content with local consideration of some diseases which are fundamentally systemic. For instance: How can one treat retinal hemorrhage locally for a patient who has high blood tension, and feel that he has played the rôle of a real physician? Or how can one expect to get rid of the exudates of a uveitis with bulbar tension low and lymph and blood vascular tension so high as to force more blood and lymph into the eye instead of carrying it out? In a case of nasal bleeding which has resulted from high blood tension, is it reasonable to conclude that the bleeding will recur if the tension remains high or goes higher? Then let us get a panoramic view of our patients, and not look at them through a tube which sometimes discovers only the local manifestation of the primary disease.

DISCUSSION

DR. LAFAYETTE PAGE, Indianapolis: I am sorry that I am not prepared to discuss this paper as it deserves. It is certainly very interesting. Most of us have very little definite knowledge of the relationship between high blood pressure and eye, ear, nose and throat conditions. For years it has been observed by oculists that certain changes in the retina, hyperemias and hemorrhages, pointed to kidney disease, and often this has been discovered long before the man in general medicine had any inkling of the condition. It is a subject that ought to be more carefully pursued as to the condition in the nose.

As to the ear, I think it is recognized generally that there is no organ that responds so quickly or reacts so quickly to the general poisoning of the system as the auditory apparatus. We have as an illustration of this the poisoning by arsenic and quinin, and the toxins of syphilis, rheumatism, and all of the microbic poisons that enter into the system manifest themselves very quickly in the auditory center. We see this in beginning tinnitus, and various other degenerative conditions in the auditory nerve. These things should be most carefully studied, and especially as to the relationship of which the doctor speaks, between the effects of poisons on the adrenals or adrenal system, which is just being worked out. The work of Sajous has

been very interesting along this line. Oppenheim and others have shown that a poison introduced into the system—for instance, that poison that produces arteriosclerosis—affects first the adrenal secretion. We have first a hypersecretion of the adrenals, followed by high blood pressure and degenerative changes in the blood pressure. There certainly is a very close connection between all of these poisons. So it behooves us all to look very carefully into these causes that are active in producing such changes. The condition frequently starts with infection along the teeth, tonsils and accessory sinuses of the nose, which act on the adrenals and the thyroid, and we have indirect effects on the nose, throat, ear and eyes.

Because of the obscurity of this subject, we are very apt to pass it by, and I would be delighted if we could work with the oculist more closely in studying the effects of these toxins which enter through the throat and intestinal tract, and their immediate effects on the eye, ear, nose and throat.

DR. F. C. HEATH, Indianapolis: The first sentence in the abstract, published in the program, says: "The ophthalmologist is frequently the first to discover the ill effects of increased vascular tension as manifested by retinal hemorrhages and retinal inflammation which accompany various forms of nephritis which escape the attention of the general practitioner until far advanced." That is correct. The question I want to raise is, do those changes really come early in the disease, or has the disease been in the system quite a long time before such changes take place in the retina? The oculist frequently is the first to recognize the fact that the patient has the disease, but, in my judgment, those changes in the eye would not be produced until the disease has been in the system a long time, producing the changes first in the blood, and, secondarily, in the eye and other parts of the system.

DR. LEACH (closing the discussion): I wish to thank the members for the interest they have shown in my paper, which I wrote more with the idea of encouraging a wider field of study. I have felt for a long time that eye and ear men were confining their study too closely to the eye and ear. It is only a matter of common-sense that many of these diseases are systemic. I think it is certainly futile to attempt to treat diseases by local means that have their foundation in a systemic way.

I think Dr. Heath is correct in the question he has raised. Retinitis or hemorrhagic conditions in the retina are really not early manifestations of a nephritis. They are at least manifestations of continued toxemia, which is the first thing we find in these cases. Then we have the gradual changes taking place in the vascular, blood and lymph systems.

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EDITORIALS

THE ETIOLOGY OF TYPHUS FEVER

Medical men whose interest in medicine extends beyond the more or less narrow limits of their own work have been following the results of the recent studies on typhus fever with the keenest interest.

This disease is not so foreign to us as we have long thought. In some of our large eastern seaports, especially New York, one or more cases, mostly imported, are constantly cropping up. In Mexico this type of fever continues to claim its toll of victims. Thus has this disease crept close enough to home to arouse in all of us more than an academic interest in it.

The nature of this disease was not known until very recently. It always had attracted considerable attention both here and abroad. In this country Brill had studied it quite a good deal, and for some time a symptom complex that he had described was known as "Brill's disease." It was looked upon as a form of infection, but the infective agent was not known.

Within the past year or so Plotz and his co-workers have succeeded in isolating a specific organism from endemic typhus fever cases in New York. This organism is described as an anaerobic, Gram-positive bacillus having definite morphological and cultural characteristics. It has been named *Bacillus Typhi-exanthematici*, and already has been generally accepted as the specific germ causing typhus fever.

A study just published by Olitsky, Denzer and Husk on the etiology of typhus fever in Mexico (Tabardillo) shows that this disease is caused by an organism similar to the one isolated from the New York cases of typhus fever. Evidently no matter where the disease occurs the etiological factor is always the same; it is the germ known as *Bacillus typhi-exanthematici*.

Furthermore, these investigators were able to obtain the same organism in the cultures

made from lice taken from the clothing of typhus fever patients. Injection of such lice into animals (guinea-pigs) produced some reaction and the characteristic splenic lesion; and cultures from such spleens yielded the specific bacillus.

A study such as this confirms our belief in the idea that the organism discovered by Plotz may be regarded as the etiology of typhus fever, and that the disease is transmitted by the lice from the clothes of the infected person.

The discovery of the cause of this disease immediately led to practical results that have astonished the whole world. Our success in the prevention and control of typhus fever has been one of the most brilliant as well as one of the most spectacular achievements of any era in medicine. The benefit that humanity already has reaped from the practical results following the clearing up of this hitherto obscure disease is beyond measure.

THE MILITARY TRAINING CAMP

Indiana doctors who have asked us for information concerning military training to be acquired at any of the numerous training camps that are to be held in various sections of the United States will be interested in knowing that there will be three camps at Fort Benjamin Harrison, ten miles out of Indianapolis. The first camp will be held from July 5 to August 4; the second camp from August 7 to September 6; and the third camp from September 8 to October 5.

The second and third camps will be held only if condition of enrollment warrants such camps, 500 citizens being the least necessary for each camp.

From the circulars sent out by the Adjutant General of the Central Headquarters at Chicago, we quote the following information concerning these military training camps:

As qualifications the applicant for enrollment:

- (a) Must be a citizen of the United States or have taken out first papers.
- (b) Must be between 18 and 45 years of age, though men otherwise qualified over 45 may be authorized to attend for special service.
- (c) Must be of sound physical condition, capable of hard drill and maneuver marching with a full infantry equipment. Eyesight normal or corrected by glasses to admit of target practice.

- (d) Must have a college education or the equivalent. By "equivalent" is meant a good elementary education, which has been supplemented by business or professional training. This is to be stated on application blank. A high school graduate is eligible.
- (e) Must bear an excellent character in his community.

Instruction.—The purpose of the camp will be to give each attendant as much of the fundamental education of a soldier, noncommissioned officer and officer as can be imparted in the duration of the camp. A certain definite routine will be prescribed for all, including rifle practice. Infantry training only may be imparted. All instructions will be under the direction of regular army officers.

Camp Expenses.—Each approved applicant will be requested to pay upon reporting at the camp \$25 for his keep and camp maintenance for each camp period. This will cover all expenses except that for transportation, uniform and necessary toilet articles.

The uniform, etc., required by each citizen is as follows; last year's approximate cost of same also being given:

1 pair tan marching shoes.....	\$ 4.50
4 pair medium weight socks, 25 cents.....	1.00
1 pair light shoes or sneakers.....	1.00
3 suits underwear, woolen, medium, 90 cents...	2.70
2 pairs olive drab breeches, cotton, \$1.25.....	2.50
1 pair leggings, regulation pattern.....	.75
2 olive drab shirts, wool, \$2.50.....	5.00
1 army blouse, cotton.....	1.75
1 campaign hat and cord.....	1.25
Necessary toilet articles, including wash basin	

Total\$20.45

The government will furnish free of cost: arms, ordnance and equipment—infantry, mess kit, tentage, blankets, poncho, cot, pillow and pillow slips, mattress and bed sheets, sweater.

Where several men come to camp together they can be assigned to the same company. Application blanks and other information may be secured by addressing the Adjutant General, Central Dept., Federal Bldg., Chicago.

Concerning the military training camps the officers of the United States Army submit the following for consideration:

Object of the Camp.—1. To offer an opportunity for business and professional men and students, of suitable educational training and age, to qualify themselves for efficient service to the country in case of need.

2. To foster a patriotic spirit and spread among the citizens of the country some knowledge of military history, military policy and military needs.

3. To instill during a short period healthy outdoor life, the habits of obedience, discipline, command of self-control, that are the prerequisites of efficiency in every business and profession, and to send citizens back from the camps better prepared to take care of themselves and others.

Obligation.—Attendance at a camp will not increase either the legal or moral obligations to those who

attend. The intention is merely to equip those taking the course of training to fulfill with more efficiency and usefulness obligations which are already laid upon them as citizens of the United States.

Course of Instruction.—Instruction will comprise the school of the soldier and squad, company and battalion drills. The mechanism and use of the modern military rifle (including target practice), military hygiene, tactics, strategy, etc. Military maneuvers and field exercises will be held toward the end of each camp.

The mornings will be devoted to a progressive program of instruction and training. In the afternoon and evenings there will be as a rule special work, such as map making, signalling, military hygiene; lectures will also be given and discussions held on various military subjects.

Books on Military Matters.—For those desiring to study military text-books the following books are recommended: Infantry Drill Regulations, U. S. Army; Field Service Regulations U. S. Army; Manual of Military Training, by Capt. James A. Moss; Studies of Minor Tactics, published by Army Service Schools; Military Sketching and Map Reading for Noncommissioned Officers, by Lieutenant Grieves.

These books may be obtained from the Army and Navy Cooperative Co., 16 East 42d St., New York; U. S. Infantry Association, Union Trust Bldg., Washington, D. C.; the George Banta Publishing Co., Menasha, Wis., or from any book publishing company.

Attendance.—Generally it is required that citizens attend one of the camps for the whole period, but those who have had service in the Regular Army, National Guard, or in a cadet corps of colleges and universities, subsequent to August, 1911, or who have attended a former military training or students' camp, may be authorized to attend during a half period—the last half of any one camp.

Subsistence.—Wholesome, healthful and ample meals will be furnished; the cost of same is included in the amount paid by each approved applicant.

Organization and Care of Men.—Attendants at the camp will be divided into companies, commanded by officers of the regular army, whose duties cover not only those of instruction, but also the health and general welfare of their commands.

Proper bathing facilities will be furnished for each company. In short, everything necessary to the health and tending to the comfort and advancement of men in attendance at a camp will be furnished without extra cost.

Inoculation.—It is strongly recommended that the typhoid prophylaxis inoculation be taken at the camp or before, the latter being preferred. (No charge for this treatment will be made at the camp or for approved applicants presenting themselves at Room 575, Federal Bldg., Chicago. Telephone Harrison 4700, Local 64, between the hours of 9 a. m., and 4 p. m., daily except Sunday.)

Enrollment.—Every approved applicant will be furnished with a letter of authority to attend camp, which letter must be presented at the headquarters of the camp upon reporting for duty.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

FROM Indianapolis comes the information that Form 26, Workmen's Compensation Act blank, does not have to be complied with by physicians, and it is reported that the Industrial Board approves the view of those physicians who have refused to fill out the blank. This is an interesting piece of news which is deserving of the attention of all those who have to do with industrial accidents.

WHILE we are discussing the question of fees for medical examination for life insurance, permit us to remind our readers that among some of the good companies that recognize the value of a thorough and painstaking physical examination, the Postal Life Insurance Company, of New York, deserves consideration; and that company also believes in the value of advertising, for, as our readers may have noted, the Postal is an advertising patron of THE JOURNAL. Doctors who have occasion to make life insurance examinations for the Postal can rest assured that they will not only receive the \$5.00 fee for the work, but the applicant will present a Postal check for \$5.00 at the time the examination is made. And while we are talking about this question of fees for life insurance examinations, why isn't it a good policy for doctors who are taking out life insurance to patronize the companies that show respect for and appreciation of services by the medical profession?

THE coming session of the Indiana State Medical Association to be held at Fort Wayne promises to be a profitable one for all those who attend. The Program Committee reports a list of excellent papers, the Committee on Scientific Exhibit promises a fine display of pathological specimens, charts, and demonstrations of various kinds, and the Committee on Arrangements reports that appropriate accommodations have been provided for the various

activities of the Association, and provision made for the customary social entertainment. The Thursday evening meeting will be held at one of the local theaters, and the public invited. Noted speakers have been selected to talk upon subjects that deserve the attention of the public. The Friday afternoon program will consist of a discussion of the features of the Workmen's Compensation Act as it pertains to physicians.

THE physicians of Indiana are reminded that application for registration under the Harrison Anti-Narcotic Law must be filed before July 1 of this year, as the fiscal year ends June 30. This applies to any and all who administer, dispense, or prescribe narcotic drugs, whether such persons have been registered heretofore or not. The instructions concerning application for registration or re-registration this year contains a special notice which reads as follows:

"A duplicate sworn inventory of narcotic drugs or preparations coming within the purview of the Act of December 17, 1914, in the possession of the applicant at the date given on this form, must accompany this application, the original inventory being retained for inspection by the internal revenue officers."

The registration fee is \$1.00, and order blanks for narcotics are \$1.00 per hundred. All applications for registry, and inventories accompanying same should be sent to Peter J. Kruyer, Collector of Internal Revenue, Indianapolis, Indiana.

WE are quite willing to admit that occasionally a doctor's name gets into the daily papers without his knowledge or consent, but when you repeatedly see some doctor's name mentioned in daily papers in connection with medical and surgical cases, it is a safe bet that the doctor permitted or even solicited the use of his name. When a doctor's name is connected with a technical write-up of a case it is a certainty that he is responsible for the information and the privilege of using his name in connection with it. Newspaper reporters not infrequently say that news concerning an operation is legitimate news for publication, but we do not believe so, and no information of any kind whatsoever concerning an operation should come from the attending physician. Furthermore, any physician who has any desire to avoid undue notoriety and the criticism of his confrères will request newspaper reporters to omit his name in connection with the write-up of any so-called medical news. There is not one newspaper reporter in a thousand who will not respect a request of that kind.

ANENT the reduction of the fee paid by the Equitable for a medical examination for life insurance, to which our readers' attention has been called in a previous number of THE JOURNAL, we are advised that several medical societies of Indiana, notably the Indianapolis Medical Society, have gone on record as opposed to making a thorough life insurance examination for less than \$5.00, and the members are advised to abide by the decision. Incidentally, we may remind our readers that we have received information, which we think is correct, to the effect that not only the Equitable but other life insurance companies, presumably paying but \$3.00 for examinations, are paying \$5.00 in those states where they find it impossible to obtain good examiners who will do the work for less than the \$5.00 rate. This only proves our contention that the Equitable and other companies will browbeat physicians into accepting \$3.00, or even \$2.00 for examination if they think they can get the work done for that price, and when it is to their interest to pay a respectable fee, then the \$5.00 rate prevails.

WARNING.—We are advised that a very clever swindle is being worked by a young man calling on physicians in various sections of the country. He is fraudulently soliciting orders and collecting money for subscriptions to medical journals and for medical books published by various firms. He usually represents himself as a student, working his way through college and trying to get a number of votes to help him win a certain contest. He sometimes uses the names of L. D. Grant, H. E. Peters, R. A. Douglas and F. C. Schneider and he usually gives a receipt bearing the heading of some Society or Association, such as United Students Aid Society; the Alumni Educational League; the American Association for Education, etc.

The description given of this swindler is— young man of the Jewish type, rather slender, with very dark hair combed straight back and shows his teeth plainly when talking.

The whole scheme is a fraud. The Societies mentioned do not exist. The idea is to collect money by offering special discounts and prices on medical books and journals and skip with the money.

This young man does not represent W. B. Saunders Company, whose name he frequently uses. He is a fraudulent subscription agent, and physicians, generally, should be on the lookout for him.

THE *Chicago Herald*, under date of April 13, publishes the following editorial which finds application in connection with the present controversy over the present price of gasoline. The *Herald's* comments are as follows:

The federal trade commission has sent to Congress a preliminary report on the rise in the price of gasoline. It draws no conclusions, but presents masses of statistical information. Among the items noted in the press summary are:

Production of crude oil remained virtually stationary; gasoline contents of crude oil decreased; exports of gasoline increased from 188,000,000 gallons in 1913 to 238,500,000 gallons in 1914 and 284,500,000 gallons in 1915; for its 62 per cent. of the gasoline produced the Standard Oil Company charged about 1 cent a gallon less than the "independents" charged for their 38 per cent.

The last item ought to move the Society for the Prevention of Cruelty to Statesmen to do something. Consider the hard lot of the member of Congress with a large constituency of automobile owners. Confronted with angry complaints about the "high price of gas" he is deprived of his old familiar explanation.

He cannot dismiss the complaints with the classic vituperation of the "trust"—the "octopus"—for here is the federal trade commission with its cold-blooded price tables. Truly the way of the statesman who deals in oratory meant only "for Buncombe County" grows harder every day.

OF all of the asinine measures that have been introduced in Congress that which originates in the fertile Christian Science brain of Senator Works of California "takes the cake." He would prevent any and all medical officers connected in any way with the Government Service from becoming members of any medical society, and, if already members of such societies, he would force them to resign. The next step in order would be to compel all medical men connected in any way with Federal Service to cancel subscriptions for any and all medical journals or medical books, and to solemnly swear that they will not accept gratuitously, or even read medical journals or medical books. As a final requirement, Senator Works should ask Federal Employees to agree to carry close to their bosoms a hand-tooled and gilt-edge volume of Mrs. Eddy's "Science and Health and Key to the Scriptures," and agree to make its teachings a guide for all action. The trouble with Senator Works is that aside from being puffed up with an exaggerated idea of his own importance, he is wonderfully shy of that kind of gray matter which tends to give a man the faintest sem-

blance of common sense. It has been said that the majority of Christian Scientists are not very well balanced mentally, and Senator Works seems to be more than living up to the reputation of the deluded sect to which he belongs. If he does not watch out, one of these fine days a commission on lunacy may be called upon to pass judgment as to whether he shall not be placed in confinement where his vagaries will do no harm.

DEATHS

W. P. DAVIS, M.D., Corydon, died May 18, aged 66 years.

VINCENT ROSE, M.D., died May 8 at the Montgomery County Infirmary.

JOSEPH H. JONES, M.D., Fort Wayne, graduate Cincinnati Medical College, died May 17.

JAMES E. WELLER, M.D., Richmond, died May 11, aged 41 years. He was a graduate of the University of Pennsylvania Medical School. After graduation he went to California, took the examination for marine surgeon in the Marine Hospital, and was one of two out of a class of 52 who passed. Soon after he was appointed assistant surgeon and sent to the field in Philippines in the Spanish-American war. After the close of the war he located in Richmond, but gradually failed in health until death came.

ALBERT O. WARD, Indianapolis, aged 73, died May 2, after an illness of several months. Dr. Ward was born in 1842 on a farm near Marion, taught school, enlisted in the army when civil war was declared, and entered Medical Department University of Michigan after the close of the war. He completed his medical course at Indiana Medical College, and began the practice of medicine at Bethel. After ten years he moved to Southport where he remained until 1887, when he located at Indianapolis. He was a member of the local medical society, Indiana State, and American Medical Associations.

JOHN L. MASTERS, M.D., died at his home, 2326 Broadway, Indianapolis, on Thursday morning, May 5, from cerebral hemorrhage. Dr. Masters was one of the most beloved physicians of Indianapolis and though for years he had not had first class health yet the end came suddenly and painlessly. He had been at his office as usual the day before and seemed to be

in his customary health. During the last eighteen years he had devoted his time exclusively to diseases of the ear, nose and throat. He was born at Brookville, fifty-seven years ago and graduated from the Louisville School of Medicine in 1886 and practiced in Brookville a few years before coming to Indianapolis in 1893.

For years he was a member of the Indianapolis Medical Society, the State Society and the American Medical Association and also the American Society of Ophthalmology and Otolaryngology and the Phi Chi medical fraternity. He had been a faithful member of the Methodist Episcopal church for many years. On account of his health during the last few years he has lived at his country home near Indianapolis and though not a regular attendant of the Medical Society, yet he was well known to the profession. His modesty was such that he never intruded unless called upon in Medical meetings. He was always courteous and careful of the feelings of others. He was never known to speak in a loud tone or get excited or angry. In his unobtrusive way he made friends slowly but his friendships were lasting. The medical profession has lost a most courteous gentleman.

WILLIAM T. DODDS, M.D., Indianapolis, died May 22, with acute disease of the heart. Dr. Dodds was ill only three days and his death was a shock to the local medical profession. He was born near Bellefontaine, O., 42 years ago, and graduated from the Indiana Medical College in 1898. He had devoted most of his life to the study of tuberculosis and through his instrumentality the tuberculosis clinic of Indianapolis was organized, during Mayor Bookwalter's administration. He also assisted in the erection of the tuberculosis cottages in connection with the city hospital. He gave freely of his time and money in order to encourage tuberculosis work in this state. When right, he was decided in his opinions and never faltered in telling the exact truth about any condition.

For years he taught in the Indiana University School of Medicine, and spent much time in the tuberculosis clinics doing what he could to alleviate the sufferers from phthisis. He made many experimental studies and was one of the first physicians to use the X-ray diagnosis for this condition. At one time he was deputy coroner of Marion Co., when Dr. A. W. Braton was coroner.

Never at any time robust, yet he persistently overworked himself. He was a specialist in the true sense of the word as he would give up more lucrative work in order to make clinical

investigations. He courted favor of no man but was true to his profession. The profession of Indianapolis and the state has lost a scientist that cannot be replaced. He was a member of the city, state and National Medical Associations. He is survived by a widow and two daughters.

NEWS NOTES AND PERSONALS

INDIANAPOLIS

THE National Conference of Jewish Charities was held in Indianapolis May 7 to 10.

AN Indianapolis chapter of the American National Red Cross is to be formed.

DR. and Mrs. O. C. Neier, 5402 East Washington Street, spent part of the month of May with relatives in Great Bend, Kansas.

ON May 17, at Hotel English, the first steps were taken toward the organization of a Birth Control League. Mrs. Margaret Sanger, of New York, head of the movement, was present.

THE City Council unanimously passed an ordinance on May 17 requiring the pasteurization and clarification of all milk sold in Indianapolis that does not have a bacteria count of less than 50,000 bacteria to the cubic centimeter.

THE annual state banquet of the Phi Beta Pi Fraternity was held in the Florentine Room, Claypool Hotel, on May 19, and doctors from all parts of the state were in attendance. Dr. W. L. Thompson, of Mooresville, acted as toastmaster, and toasts were responded to by Drs. John H. Hare, Everett L. Hays, J. F. Dinnen, Fort Wayne; Joseph D. Heitger, Bedford; J. E. P. Holland, Bloomington. Dr. Samuel E. Earp is president and Dr. Paul B. Coble secretary of the Association.

A REPORT from Dr. Henry G. Morgan, city sanitarian, Indianapolis, shows that of an examination of 1,744 pupils of the public schools, 1,394 are deficient mentally or physically; 390 are in immediate need of open-air schools, 633 are below normal in physical and mental powers, 231 are anemic or have suspected tuberculosis, 150 are mentally defective and 350 were found to have defective teeth. During the last year the board of health have fitted 205 children with glasses, have removed tonsils and adenoids from 208 children and sent 987 to the dental hospital.

DR. PAUL F. MARTIN of Indianapolis and Dr. W. C. Moore of Summitville left May 28, to take charge of a hospital at Budapest, Austria, representing the American Physicians' Expeditionary Society. They expect to be gone at least six months. Mr. Martin is especially well fitted for this work, being a member of the Medical Reserve Corps U. S. Army and having served as interne at the German Hospital, New York city and superintendent of the Indianapolis City Hospital. Dr. Moore will be Dr. Martin's assistant. He has also been an interne at the city hospital.

THE National Conference of Charities and Corrections was held in Indianapolis May 6 to 19. Pittsburgh was chosen as the place of meeting for 1917, and the following officers were elected: President Mr. F. A. Almy, secretary of the Charity Organization Society of Buffalo, N. Y., first vice-president, Mr. Joseph Lee, Boston, president of the Playground and Recreation Association of America, second vice-president, Miss Julia C. Lathrop, Washington, head of the national children's bureau, third vice-president, Rabbi Emil W. Leipziger, New Orleans, head of the Louisiana State Conference of Charities and Correction. The program was accompanied by national exhibits in the State House, occupying three floors of the building. Many other co-related conferences were held during the meeting. A distinct branch of the Conference was created in the form of National Society of Medical Social Service Workers.

GENERAL

DR. W. P. WOODS, Evansville, has returned from a visit in Texas.

MOTHER GERTRUDE, Superior of the Good Samaritan Hospital at Kokomo, died April 28.

DR. M. H. HOSTETLER has moved from Grabil to Leo, but will continue to conduct an office at Gribil.

DR. H. J. DEFREES, town health officer at Nappanee, has established a new garbage system for that city.

DR. J. E. WALTHERS, of Glenwood, has been appointed pension examiner to succeed the late Dr. Elliott.

HOME Hospital, LaFayette, has a new modern X-Ray laboratory, with complete equipment, costing \$2,500.

THE city of South Bend has appropriated \$2,000 for the purpose of making a sanitary survey of the city.

MISS LILLIAN MAHIN, nurse, has been employed for a year by the Wayne County Social Service Bureau as visiting nurse.

DR. E. RAY ROYER, North Salem, is taking post-graduate work in New York. Dr. A. E. Mozingo has succeeded to his practice.

DR. JAMES A. RAWLEY, Brazil, is enlarging his hospital by the addition of twelve new private rooms and a larger operating room.

DR. J. M. MILLER, Decatur, has returned from New York City where he has been doing post-graduate work in eye, ear, nose and throat.

DR. CHARLES STOLTZ, South Bend, was married on May 27 to Miss Mary Lou Foster, office secretary at Epworth Hospital, South Bend.

DR. and Mrs. E. R. Sisson, Greenfield, announce the marriage of their daughter Marion to Maxwell R. Peyton, of Danville, on May 6.

THE Lutheran Hospital Training School for Nurses of Fort Wayne, graduated thirteen nurses at their commencement exercises held May 10.

DR. C. G. LYONS, formerly of Dayton, O., will succeed Dr. Harry Miller as assistant surgeon at the hospital of the National Military Home at Marion.

DR. H. W. SIGMOND, Crawfordsville, will spend part of the summer in Chicago in the X-Ray Department of the Cook County Hospital.

CHILD WELFARE WEEK was observed at Muncie, April 24 to 30. The opening meeting was addressed by Dr. Ada Schweitzer of the State Board of Health.

OUT of sixteen medical students who will be admitted to the Indianapolis City Hospital this year, ten will be graduates of the Indiana University School of Medicine.

DR. MORRELL E. SIMPSON and family have returned to Bedford after several months spent in the East where the doctor has been taking post-graduate work.

DR. SAMUEL M. BRICKNER, of New York, for many years assistant editor of the New York Medical Journal, but later editor of the Medical Pickwick, died May 6, at Saranac Lake, New York.

DR. AUGUST KNOEFEL, Terre Haute, head of the District First Aid Work, has started a series of First Aid meetings, giving illustrated lectures of instruction in the work.

DR. N. A. JAMES, Tell City, was married May 17 to Miss Mabel Becker, also of Tell City. They left immediately for a three weeks' wedding trip, including a visit to Cuba.

DR. H. M. BRACKEN of the Minnesota State Board of Health has been made Chairman of the Council of Public Health and Instruction to take the place of Dr. H. B. Favill who recently died.

DR. S. E. SMITH, head of the Medical Department of Easthaven, has been named vice-chairman of the Committee on Mental Hygiene at the Convention of National Charities and Corrections.

THE next meeting of the Third District Medical Society will be held at French Lick, and the officers announce that the next meeting is going to be "a 'LIVE' one, strictly for the bunch that are up and doing."

THE annual meeting of Indiana Institute of Homeopathy was held in Indianapolis the week of May 15. Dr. C. R. Armstrong, Thorntown, was elected president, and Dr. Herbert Baker, Lebanon, secretary.

DR. J. S. BOYERS, Decatur, president of the Indiana State Board of Health, left May 10 for Washington, D. C., to attend the Public Health Conference, and later went to Johns Hopkins to do some post-graduate work.

THE sixteenth annual commencement of the Hope Hospital School of Nursing, Fort Wayne, was held at the first Methodist Episcopal Church, May 17, addressed by Rev. A. J. Folsom. Five nurses received their diplomas.

TWENTY-SIX nurses were graduated from the Nurses' Training School of the Methodist Hospital, Indianapolis, at their eighth annual commencement. Rev. Demetrius Tillotson, of Greencastle, delivered the address.

THE Indiana Eclectic Medical Association held their annual meeting at Indianapolis May 8 to 10. Dr. Henry Carter, Brighthurst, was elected president for the coming year, and Dr. F. L. Hosmer, Indianapolis, secretary.

THE fifteenth annual commencement of the Terre Haute Union City Hospital was held on May 8, when nine young women received their diplomas. The address was delivered by Rev. J. Boyd Jones, on "The Life Worth While."

THE city of Anderson has passed a law compelling physical examination of all persons serving public food, and requiring them to have a physician's certificate before granting a license for such work. This law went into effect June 1.

DRS. G. M. LaSelle, James Wilson, and Fred M. Whisler, of Wabash, have formed a partnership and have equipped a new building with laboratory, operating room, X-Ray, and all modern conveniences for the practice of medicine.

A MEETING of the American Association of Clinical Laboratories will be held in Detroit on Monday, June 12, at 10 a. m., to complete the organization of this association which has for its object the standardization of commercial clinical laboratories.

THE National Association for the Study and Prevention of Tuberculosis, in convention at Washington, D. C., May 12, voted to accept the \$1,000 gift of the Metropolitan Life Insurance Company for a community experiment on tuberculosis control.

The following officers were elected at the recent meeting of the National Association for the Study and Prevention of Tuberculosis: Dr. E. R. Baldwin, Saranac Lake, president; Dr. Henry Barton Jacobs, Baltimore, vice-president; and Dr. William H. Baldwin, Washington, treasurer.

THE fourth annual meeting of the American Association of Anesthetists will be held in Detroit June 12 in the roof garden of Hotel Tuller. Dr. Willis D. Gatch, Indianapolis, president of the Association, will open the scientific session with an address on Instruction of Medical Students and Hospital Interns in Anesthesia. Fourteen papers on subjects relating to anesthesia comprise the program.

AN ordinance prohibiting the handling or sale of medicine save by licensed physicians has been passed by the city of Gary. Itinerant licensed doctors will have to pay a fee of \$25 per week to the city. Violation of the ordinance entails a \$300 fine or six months in jail.

DR. C. B. KERN, LaFayette, attended the National Association of the Anti-Tuberculosis Society at Washington, D. C., beginning May 10, and visited a number of the large eastern cities during his absence. His wife and daughter, accompanied him.

THE site has been purchased for the new Huntington County Hospital to be located on the south side of Huntington on land known as the Schaefer Grove. Building operations will begin soon, and they hope to have the new hospital in operation by January, 1917.

SEVERANCE BURRAGE delivered an address on the subject of "Tuberculosis" at a joint meeting of the Indiana Eclectic Medical Association and the Indiana Physio-Medical Association held during the session of each of these associations which convened at Indianapolis the week of May 8.

DR. T. W. KELSEY, who has been located at Attica for the past six years in the practice of medicine, has sold his practice to Dr. A. R. Kerr, of Mellott. Dr. Kerr has gone to Chicago to do some post-graduate work in eye, ear, nose and throat, and will take charge of Dr. Kelsey's practice about the middle of July. Dr. Kelsey will spend the winter taking special work in the East, and will later locate in one of the larger cities.

SEVEN physicians of Newcastle have formed a cooperative body to be known as "The Clinic," and they will erect a modern two-story building on the site of the present home of Dr. J. E. Hiatt. The office will contain general office, waiting room, drug room, two small operating rooms, and three private offices on the first floor; on the second floor there will be four office rooms, a dressing room, sterilizing room, two recovery wards, and all conveniences. The basement, besides heating plant and janitor's quarters, will consist of four clinic rooms, pathological laboratory, dark room, and X-Ray laboratory. The doctors associated in this organization are J. E. Hiatt, D. S. Wiggins, H. W. MacDonald, E. K. Westhafer, C. C. Bitler, George Smith, and G. A. Hiatt.

THE second annual meeting of the Interstate Association of Anesthetists will be held at the Hotel Seelback (Red Room) Louisville, Ky., July 26 and 27, in conjunction with the National Dental Association. A splendid scientific program has been arranged, and an innovation will be a special section of dental anesthetics. The Association dinner will be served at the Hotel Seelback, and a number of prominent after-dinner speakers will enliven the occasion with their wit and humor. For further information, address F. H. McMechan, M.D., Sec.-Treas., Avon Lake, O.

EIGHTY-FIVE young men and five young women, a total of ninety students, have made application for admission to the freshman class of the Indiana University School of Medicine for the year beginning Sept. 19, 1916. This number is by far the greatest in the history of the school. The actual matriculation will probably be in the neighborhood of seventy-five, since there is always a certain number of students who fail to complete entrance requirements, or for some reason find it impossible to enter as early as they had hoped. There are in Indiana University 109 freshman premedical students, so that the promise for the succeeding year is even greater. At De Pauw, Butler, and other colleges of the state, there are considerable groups of premedical students. This is not interpreted as meaning that there is a marked increase in the number of students from Indiana entering on the study of Medicine. It means that the number of Medical Schools now having entrance requirements corresponding to those of the Indiana University School of Medicine, namely two years of collegiate work, has become so great that students are no longer finding it convenient to slip off to some school with low entrance requirements for their education. Still further, it is coming to be generally appreciated that the requirement for the licensure examination in the State of Indiana is two years of collegiate work in addition to the work of a four year high school course. And so students cannot run off to schools with low entrance requirements and come back to practice in the State of Indiana. Also, it is coming to be appreciated that the Indiana University School of Medicine is not going to be, but IS one of the recognized A-plus schools of the United States. All of these factors contribute to the increased attendance in the State Medical School.

CORRESPONDENCE

CRITICISM OF THE DUAL CAPACITY OF MEDICAL EXAMINING BOARDS

FORT WAYNE, IND., June 5, 1916.

To the Editor:—I have been told (yet am not quite certain of the fact) that in some states the Board of Medical Examiners, who license regular, eclectic and homeopathic practitioners, also examine and license osteopaths, chiropractors, opticians, etc. If this be the case, do you not think that it is incumbent on the American Medical Association to condemn it as derogatory to its prospective Fellows to be placed in such juxtaposition?

When the movement began to increase the scope and completeness of medical education in America to equal that in any civilized nation, there were devised several backdoor entrances into the profession which enable persons, whose education is limited to a fractional part of medicine, to call themselves "doctors," and assume all the privileges of real physicians whom they displace in the service to the public. There is no need of any controversy with these persons, as this is a matter for the people and legislatures, but self-respect demands that educated practitioners should not be classed with them. You are sure to be better informed than I, and, if the fact be as told to me, I think that you would be doing the profession a really great service by drawing the attention of the American Medical Association to the matter.

Sincerely yours,

A READER.

SOCIETY PROCEEDINGS

THIRD DISTRICT

The annual meeting of the Third District Medical Association was held at Huntingburg, May 11.

Meeting called to order by President Moore.

Dr. H. M. Baker appointed secretary pro tem.

Brief and resolution by Dr. Hurty regarding all time health officer was read.

Discussion:

Dr. Schweitzer: Explained resolution in detail and asked for criticisms.

Dr. Leach: Criticised the salary and politics. Thought that only recent graduates would want to bother with such an appointment.

Dr. J. P. Salb: Advised district health officer for each congressional district in the state. Does not think the time ripe for an officer in each county, this would follow later.

Dr. J. Y. Welborn: Endorses what Dr. Leach says; cites his own experience as health officer of Evansville; recommends that officer be under civil service; says that district officer would be as inefficient as are those at present; could not look after quarantine, etc.; does not think the time is ripe for all time officer.

Dr. Bigham: Says office would not be effected by politics; special board would do the appointing; salary for Dubois County would be \$1,500 a year.

Dr. C. W. Schwartz: Does not believe district officer would be efficient; is in favor of making this a non-political office.

Dr. Schweitzer: Explains that eligibles must have passed a civil service examination.

Dr. Knapp: Wants service as well as efficiency.

Dr. Welborn: Says there is already a law requiring examination of health officers; cited the recent work done by the American College of Surgeons.

Dr. Moore: Agrees with Dr. Salb in his idea of a district health officer absolutely necessary to put him under civil service; introduced resolution.

Dr. Leach: Moved that Dr. Moore's resolution be adopted; seconded by Dr. Salb.

Vote carried by small majority.

Resolution as follows:

RESOLVED, By the Third District Medical Association of Indiana that we favor the appointment of one health officer for each congressional district in the state, the same to be a graduate of a recognized medical college, and who can pass a rigid examination in state medicine and sanitary science. The same to be appointed by a non-partisan board of examiners, and placed under civil service regulations with a salary of not less than \$5,000 per year.

A communication from Indiana Society for the Prevention of Tuberculosis referable to the "Works Bill" in committee in U. S. Senate.

Discussion by Drs. Leach and Schweitzer.

Officers instructed to draw up resolution condemning same, and report at afternoon session.

Dr. Welborn's paper, "The Method of Diagnosis."

Discussion by Drs. Baker and Heitger.

Adjourned for lunch.

Luncheon at Ideal Hotel, twenty-six were seated as the guests of Dubois County Medical Society.

Afternoon Session.

The following resolution was adopted:

WHEREAS, The Third District Medical Association in regular annual meeting assembled feels that the bill in committee in the U. S. Senate known as the "Works Bill" designed to prevent the employees (doctors) of the United States Public Health Service from becoming members of any medical or private association of any kind, is unjust and not in accord with the best interests of the public health work; therefore be it

RESOLVED, By the Third District Medical Association that it does not approve of and thoroughly condemns this bill.

Election.—The following officers were elected: councilor, Jos. D. Heitger, Bedford; president, Henry C. Knapp, Huntingburg; vice president, Wm. R. Ryan, French Lick; secretary treasurer, H. M. Baker, Holland.

Paper by Dr. Ada Schweitzer, "The Nature of the Specimens Sent Us As Revealed by the Laboratory Lens."

Paper by Dr. E. P. Easley, "Albuminuria, Its Cause and Significance."

Paper by Dr. E. Leach, "Blood Pressure."

The next meeting will be held at French Lick. Date to be set by the officers.

Adjourned.

H. M. BAKER, Secretary.

FOURTH DISTRICT MEDICAL ASSOCIATION

The twelfth annual meeting of the Fourth District Medical Association was held at the Library Building, Aurora, Ind., May 16.

At a short morning session the president, John H. Green, read his address. Preparedness was his subject, it was brief, pointed and timely. He particularly called attention to the coming legislature when the irregulars will make effort to legalize their practices, and he advised the members to give their support to such candidates at the coming election, whom they knew to give justice to the regular profession.

Dr. George H. Keiper, president of the State Medical Society, who attended this meeting, highly endorsed Dr. Green's address, laying special stress on the importance of becoming active early and not waiting until it is too late and then expect to accomplish all by sending a few telegrams.

Dr. O. A. Turner of Madison next read a paper on the Prophylaxis of Diphtheria, after which the meeting adjourned to meet at 1:30 p. m.

At the afternoon session the following program was concluded:

Serotherapy and Vaccine Treatment, George T. MacCoy of Columbus; discussed by Drs. A. G. Osterman, W. H. Stemm, J. P. Ward, O. S. Janith, C. R. Bird and others.

Eyestrain in General Practice, by E. D. Freeman of Osgood; discussed by R. W. Cochran, George H. Keiper, R. M. Copeland and others.

The Relation of General Diseases to Diseases of the Special Senses, by Dr. C. E. Gillespie of Seymour.

Blood Pressure by Dr. Paul R. Tindall of Greensburg; discussed by Drs. George E. Denny and John Elfe.

The House of Delegates reported the election of the following officers: president, Dr. O. H. Turner, Madison; vice president, Dr. E. J. Libbert, Aurora; secretary, Dr. Paul R. Tindall, Greensburg; treasurer, Dr. D. E. Douglas, Greensburg.

An invitation from Greensburg to meet there in May, 1917 was accepted. The committee on necrology made its report.

During the afternoon session the ladies enjoyed an auto ride into Ohio to Mt. Nebo, a bluff overlooking the Ohio river; a lunch was served there and they all enjoyed the beautiful scenery.

At 5:30, after the conclusion of the scientific program, a banquet was served at the Dearborn Club, after which Mr. Horace G. Williamson, humorist of Cincinnati, offered a special humorous entertainment for the rest of the evening.

The attendance was large (seventy-two physicians registering), the papers were good, the discussions were lively, the entertainment was splendid. It was a good meeting.

F. M. MUELLER, Secretary.

REPORT OF COMMITTEE ON NECROLOGY

In the onward sweep of time, the tomb-builder who marches on his resistless course regardless of individual or men, He, in whose hands rests the destinies of mankind, He that curbs the mighty and sustains the low, has called three of our membership, Dr. Walter J. Mitchell of North Vernon, Dr. R. T. Neffner of Weisburg, and Dr. James Wood of Greensburg to their long home, therefore be it

Resolved, That we have missed them and feel their loss. That in the fields of their activity their loss will be mourned, in their homes the ties of which have been broken will never be repaired; we, therefore extend to their families our sympathy and express the hope that the Father of the widow and the orphans may support and sustain them and bring them together in a union again, in that realm where all is peace.

DR. GEORGE E. DENNY,
DR. O. A. STEWARD,
DR. A. G. OSTERMAN.

NINTH COUNCILOR DISTRICT

Annual meeting of Ninth Councilor District Medical Association was held at Crawfordsville, May 18, with an attendance of about 220. Much interest and good spirit was manifest, and it was one of the best meetings ever held in the district.

The following scientific program was carried out: "Lesions of Stomach and Duodenum, with Special Reference to Etiology and Diagnosis," Dr. C. W. Dowden, Louisville, Ky.; "What Has Surgery to Promise in Gastric Duodenal Ulcer?" Dr. Louis Frank, Louisville, Ky.; "Following Your Nose," Dr. Otic C. Higgins, Lebanon; "Occipito-Posterior Positions," Dr. S. B. Simms, Frankfort; "The Artificial Feeding of Infants," Dr. T. W. Kelsey, Attica; "Diagnosis and Treatment of Fractures," Dr. O. D. Hutto, Kokomo.

The Ninth District reports the following membership in good standing on May 1: Boone County, 23; Tippecanoe, 57; Hamilton, 21; Tipton, 16; Montgomery, 36; Clinton, 16; Howard, 31; Fountain-Warren, 34; making a total membership of 234.

ELEVENTH DISTRICT

The eighteenth meeting of the Eleventh Councilor District Medical Association was held, May 18, at North Manchester with 80 members and visiting physicians present. A medical clinic was held in the morning by the local physicians, assisted by Dr. Alford Henry of Indianapolis.

On invitation, the association voted to meet in Peru on October 19.

The association voted a protest, through its secretary, to the Works resolution making it unlawful for any member of the Public Health Service to become a member of any medical or private health association.

The following program was presented: "The Value of Specific Gravity in Urinalyses and How Modern Bacteriological Findings Will Effect This," B. H. Landes, Longcliff; Opening Discussants, E. O. Daniels, Marion, M. H. Taylor, Macy; "Urogenital Disturb-

ances in Children," Nettie B. Powell, Marion; Opening Discussant, J. C. Gilbert, Logansport; "Some Kidney Stones," Loren W. Smith, Wabash; Opening Discussants, W. S. Grayston, Huntington, E. H. Griswold, Peru; Address, "Care of Early Mental Cases," F. F. Hutchins, Indianapolis.

At close of scientific session the members and their families sat down to a banquet at the Zion Lutheran Church, the arrangement and quality of which excelled any enjoyed by the association since its organization.

Following the banquet Dr. C. H. Good presided as toastmaster and the following toasts were responded to: "Looking Backward," Dr. R. F. Blount, Wabash, Ind.; "Who Rules," Dr. G. R. Daniels, Marion, Ind.; "The Present," Dr. J. L. Gilbert, Logansport, Ind.; "That Telephone," Dr. O. U. Carl, Peru, Ind.; "Looking Forward," Dr. C. S. Black, Warren, Ind.; "It Is All Over Now," Dr. J. C. Fretz, Deedsville, Ind.

P. B. CARTER, Secretary.

INDIANAPOLIS MEDICAL SOCIETY

Meeting of March 28

Meeting was called to order at 8:15 by the president. President announced following committee for formulating a fee schedule applicable to services rendered under the Workmen's Compensation Law: Dr. J. H. Oliver, Chairman; Dr. N. E. Jobes, Dr. Edgar Kiser, Dr. Raymond Beeler, Dr. E. Wales, Dr. J. R. Newcomb, and Dr. W. P. Garshwiler.

Standing committee on public health and legislation was announced as follows: Dr. T. B. Eastman, Chairman; Dr. Ralph Chappelle, Dr. W. B. Kitchen.

SYMPOSIUM ON DISEASES OF CHILDREN

Paper, "Diagnostic Procedures in Pediatric Practice," Dr. E. F. Kiser.

Paper, "Feeding During the Second Year," Dr. James H. Taylor.

The second year may be termed the second period, extending from the tenth to the twenty-fourth month. There are two classes of infants, the breast fed, and the artificially fed. The well fed breast baby at ten months, weighing 18 to 20 pounds with perfect digestion is to be taken as the normal standard. Fresh clean cow's milk should form the basis of the child's diet—for the second period. Each milk meal should be supplemented by some additional soft diet selected from fruits, eggs, meats and vegetables. Foods, particularly cereals, should be properly cooked. Meals should be given at regular intervals, with no piecing between meals. The physical state of the child should be taken into account as influencing the quality and quantity of the food. The best environment together with cleanliness and fresh air are essential factors in the feeding problem.

Paper, "Pulmonary Diseases in the Young," Dr. A. C. Weaver.

Paper, "Some Kidney and Bladder Affections in Children," Dr. J. Don Miller.

Of all the affections of the kidney in infancy and childhood the most common are nephritis and pyelocystitis. Acute nephritis may be a complication of any of the acute infectious diseases, but probably it

develops more frequently as a sequela of scarlet fever. The disease may develop, run its course and terminate favorably without any symptoms. So it is advisable to make several urinary examinations during the course of any acute infection to avoid the mistake of overlooking a possible nephritis as a complication of the infection.

Pyelocystitis is an infection of the pelvis of the kidney and of the bladder. It is very common in infancy and childhood, especially in girls. The chief symptoms of this disease is temperature, that is of distinct temperature periods without any evident cause. And that this condition is of very frequent occurrence is evidenced by the fact that in large children's hospitals urinary examination for the detection of this condition is a routine measure. Simple cystitis exists as a result of an infection of the *Bacillus Coli Communis* or *Bacillus Proteus*. This usually follows an attack of acute intestinal disease.

Paper: "Bone Diseases in Infancy and Childhood," Dr. E. B. Mumford. Discussion. Dr. A. C. Kimberlin: Diet, syphilis and tuberculosis must always be considered when making a diagnosis in children's diseases. Physical examination of the chest shows a wide latitude in normal breath sounds, making it difficult to determine and identify abnormal and normal sounds. The von Pirquet reaction is more reliable in infants than in adults. This reaction may be positive and yet the child not be suffering with tuberculosis. Roentgen-ray examination is apt to introduce an element of uncertainty in cases of pulmonary tuberculosis. Physical examination ought to determine a chest condition without the Roentgen ray. Empyema is insidious and apt to be overlooked in diagnosis until well advanced. The tubercular cough of infants is unlike that of adults. It is caused in infants by the pressure of enlarged mediastinal lymph nodes on the bronchi and this produces a "brassy" cough. Urinalyses should be made over a period of two or three years following acute infections, inasmuch as kidney lesions may be latent and develop late.

The question of the tonsils is a difficult one to decide. Cited a case of prophylactic removal of the tonsils followed by tonsillitis, arthritis, pan-carditis and death.

DISCUSSION

Dr. Burckhardt: Observation of a child should be made while the child is asleep. The attitude of a child when asleep is indicative of health or disease. Child should be stripped for examination. If this is done not many cases of empyema would be overlooked. Umbilical infections should be searched for in cases with a temperature of obscure origin. This infection may not be evidenced by redness of the skin because the infection is deep. Pulmonary tuberculosis in infants begins at the base.

Meeting adjourned.

M. N. HADLEY, Acting Secretary.

Meeting of April 4—Central Insane Hospital

The meeting was called to order at 8:30 by the president. The minutes of the previous meeting were read and approved. The application of Dr. Don L. Miller was read for the first time and posted for thirty days. The applications of Drs. R. B. Crabill, William L. Royster and William R. Boggs were read for the second time and referred to the council.

PROGRAM

Paper: "Clinical Report of a Case of Progressive Lenticular Degeneration," Dr. Max A. Bahr and Dr. F. C. Potter.

Progressive lenticular degeneration of the type described by Wilson is a disease which occurs in young people, which is often familial but not necessarily congenital or hereditary. It is essentially and chiefly a disease of the extrapyramidal motor system, and characterized by involuntary movements, usually of the nature of tremor, dysarthria, dysphagia, muscular weakness, spasticity, and contractures, with progressive emaciation. With these may be associated emotionalism and certain symptoms of a mental nature.

Our case did not present the true type of Wilson's disease but was complicated by involving also the pyramidal tracts by an extension of the pathological process inward as evidenced by increase of the patella reflexes, true paralysis, and also other manifestations of internal capsule involvement.

A pedigree chart which was presented showed that three brothers and one sister had previously died of the disease. The early life of the patient presented nothing special. His occupation was that of a life insurance agent and lawyer. He has two sons, both of whom are bright and ambitious.

History of patient's illness. The onset occurred during the night of Sept. 6, 1911, when the patient retired, he was as well as usual, but when he awoke the next morning his right side was paralyzed, and he could not articulate distinctly. After about two weeks, he began to improve, this paralysis gradually disappeared, and in five or six weeks his condition was nearly normal again.

On Aug. 12, 1912, he had a second attack which was very much like the first, except this time, his left side was involved. After about two weeks, the paralysis again showed some improvement and later, he was able to walk with the aid of a cane.

On Aug. 20, 1914, he was transferred to the Central Hospital for the Insane. On admission, he was tidy, his general health appeared to be fair, and he did not complain of feeling ill. There was a stiffness in his body and limbs, and his gait was so uncertain that it was hard for him to walk, even with the aid of a cane. There was a decided dysarthria, with a nasal intonation and regurgitation of liquids through his nose to the extent, often to threatened suffocation. Words that required the cooperation of the tongue were most difficult for him to pronounce. The tongue on protrusion showed gross oscillatory tremors. Pupils were dilated and reacted sluggishly to light and accommodation. The patella reflexes were very active and the exaggeration was more pronounced on the left side. The Romberg phenomenon was present, and there was a slight tendency to ankle clonus, especially on the left side. Later a bilateral Babinski phenomenon was noted which was especially prolonged on the left side. Spasmodic laughing would occur which would continue several minutes without power to control. The patient became gradually more helpless and lost weight.

Examination of the blood and spinal fluid gave a negative Wassermann reaction.

Late in the disease and about three weeks previous to his death the patient complained frequently of vague pains, and there was a dull headache. There also developed a slight contracture of the left arm,

and all his movements showed a progressive paralytic weakness. He gradually became indifferent as to his condition, and less mindful of his surroundings, and there was rapid progressive mental weakening. The day previous to his death, his pulse was weak and thready, and respiration shallow and rapid. He would strangle when given anything to swallow, and could hardly be aroused. At this time his pupils were widely dilated and he was in a state of profound prostration.

Death occurred at 4:40 p. m., April 21, 1915.

Demonstration of Brain.—Necropsy one and a half hours postmortem. Grossly, the brain shows very little change. After hardening in 10 per cent. formalin, transverse section of brain shows areas of softening in the right caudate and lenticular nuclei, one area involving the motor fibers of the internal capsule; and similar, smaller areas in the putamen of the left lenticular nucleus. Section of the pons shows an area of softening in motor fibers on the right side. Section of medulla above decussation, shows degeneration of the right pyramidal tract.

Microscopic examinations of sections at different levels confirms the gross diagnosis.

Paper: "Clinical Demonstrations of Premonitory Manifestations in Mental Diseases," Dr. Max A. Bahr.

There are noted many mental cases, and especially does this apply to the so-called "functional group" which is merely a group of as yet not definitely known physical pathology, where during the early childhood of the individual or at the onset of puberty, or during the adolescence or even later, many distinct peculiarities of character and eccentricities have antedated the outbreak of the psychosis at times for many years.

These are the danger signals to which I desire especially to call your attention and to which the general practitioner has not attached sufficient significance, for it is by the recognition of these danger signals and the proper dealing with them that a future mental catastrophe in the individual can be avoided. I refer here especially to certain fundamental defects of constitution of the individual, his makeup so to speak, his habits, and those things which are the expression of poor endowment or lack of mental balance. Thus, it is my object to point out to you in a few patients, that their psychosis did not originate from a perfectly serene and cloudless sky, but that there were certain innate weaknesses in the patient which together with a lack of self-control on the part of the individual and of faulty management, were factors which were responsible for the outbreak of the psychosis.

Among this group I do not mean to include those grossly defective processes of an organic nature as is noted in cases of idiocy and imbecility and in which cases the defective makeup is so apparent that no further consideration is necessary.

Several cases were presented to demonstrate that there is a relationship between the so-called premonitory manifestations or mental characteristics of an individual as there exist before a definite psychosis breaks out, and the type of psychosis itself.

A case of paranoid dementia praecox in which the patient before her psychosis never appeared quite natural, but instead was considered odd, peculiar, with tendencies to hobbies, day-dreaming and phantasizing was presented. The various manifestations of her psychosis developed upon the peculiar background of

the individual and were the expression of various trends in the patient's mind. This patient had the delusional idea that she was the Queen of England and the present rightful heir to the throne. This had resulted from the belief that she was the direct descendant of Mary Queen of Scots who took such a prominent part in her early phantasy life. The psycho-analytical study of this case gave a most interesting connection between her early phantasy life and her present delusional idea that she is the Queen of England and which was so logically explained on the part of the patient.

Cases were also presented demonstrating the different makeups in the various types of the manic-depressive insanity.

Discussion: Clinical Report of a Case of Progressive Lenticular Degeneration, Dr. Neu.

Dr. Neu called attention to the pedigree chart and the value to be derived from a study of the history. A marked tendency to apoplexy in entire family. A constitutional inferiority in the vascular conditions is a consideration which is given much attention in Europe but is not recognized in this country. It is highly probable that the origin of the pathology in this case was in the vascular system.

It is very important that we recognize psychical tendencies in childhood. Greater attention should be given by the medical profession to the study of such tendencies, in order that they may be earlier recognized and appropriate advice given.

DISCUSSION

Dr. Hutchins: Wilson's work with cases of Wilson's disease makes apparent two main points: (1) The selective work of different agents which is very characteristic of this disease—also that it is associated with cirrhosis of the liver and that the lenticular nucleus often is bile-stained while the surrounding tissue is not so affected; (2) involuntary movements such as athetosis, tremors of various kinds and choreic movements associated with rigidity are much better understood. Corpora striatum is phylogenetically an older structure than the cerebrospinal system. Caudate nucleus and putamen are very closely connected but these both in turn are connected with the globus pallidus. From the globus pallidus we have efferent fibers which pass down joining the pyramidal tract. In fishes this is the only motor tract, but as the pallium was gradually formed this system has been submerged so that it is no longer the main motor tract, but acts autonomically in producing effects upon the motor system. The cerebello-rubro-thalmo-cortical tract with its association with the rubro-spinal tract conveys from this autonomic system influences that steady or regulate the movements characteristic of certain conditions notably paralysis agitans. There is no sensory disturbance or paralysis in a true Wilson's disease. The process must spread to other tracts before these symptoms appear.

The necessity of recognizing early the signs of psychic disturbances is very important. Early treatment gives results. There is not necessarily any involvement of brain structure. Improvement depends upon education of the patient, thereby enabling him to make the proper adjustments.

DR. POTTER (closing): The vascular changes occur only in the media. In the case under discussion there was no aneurysm, thrombus or embolus. If a throm-

bus is formed in a vessel supplying the lenticular nucleus, we should find softening in the thalamus. That condition did not exist in this case.

DR. BAHR (closing): We did not intend to leave the impression that this case was a typical Wilson's disease. The continuity of the lenticular nucleus and the capsule accounts for the extension of the process and we may therefore have the syndrome of Wilson's disease.

Meeting adjourned. Attendance 53.

Meeting of April 11

The meeting was called to order by the president at 8:15 p. m. The minutes of the previous meeting were read and approved. Drs. William Boggs and William L. Royster were elected to membership in the society, their applications having been favorably considered by the council.

The secretary read a letter from Dr. Wesley Allen's family expressing their appreciation of the flowers sent by the medical society. A letter from Dr. W. S. Campbell of Chicago, was read, in which he called attention to pending legislation relative to pharmacists and physicians. This matter was referred to the council.

Program: Symposium on the Commoner Diseases of the Eye.

Paper: "School Trachoma," Dr. F. C. Heath.

Much trachoma is reported in schools of Indiana and Kentucky. Is it trachoma or follicular conjunctivitis? Diagnosis in typical cases easy from size, color, arrangement and location of follicles, complications, etc. Diagnosis difficult in many atypical cases. Practically no difference histologically and bacteriological differences undetermined as yet. Many cases of enlarged follicles seen in city and college dispensary clinic, the clinicians agreeing that nearly all of these are follicular conjunctivitis. As contagion is carried principally in the discharge, practical rule for inspectors is: Exclude cases with discharge as well as severe or doubtful cases, while mild cases without discharge may be allowed to attend school.

Paper: "Frequent Type of Conjunctivitis," Dr. T. C. Hood.

Conjunctiva, by reason of situation and exposure, very frequently ignored and attacked by disease germs. Differentiation of the redness of conjunctivitis and that from disease of the deeper structures of the eye. Most frequent types are: (1) simple catarrhal conjunctivitis, (2) epidemic conjunctivitis or "Pink Eye," (3) follicular, (4) phlyctenular, (5) gonorrheal ophthalmia and (6) trachoma.

The first caused by any irritant other than the infections and follows the exanthems or traumatisms—gets well when cause is removed. The second contagious and due to Koch-Weeks bacillus. Runs a course of ten days or two weeks and can be cut short by antiseptic astringent solutions. The third is due to enlargement of the mucous follicles of the lid conjunctiva—comparatively noncontagious. Cured by destroying the enlarged lymphoid follicles or causing their absorption by stimulating applications and iron tonics—may be mistaken for trachoma. The fourth, often called scrofulous conjunctivitis manifested by a lesion, first vesicle then ulcer, at or near the limbus, with pain, photophobia and a sticky discharge, lachrimation and blepharospasm. A local expression of a general dyscrasia, probably in many cases tubercular.

Cured by atropin, yellow oxid mercury salve and tuberculin. The next in order, gonorrheal ophthalmia, is due to infection from the gonococcus of Neisser, which causes a violent inflammation of the whole membrane and a profuse purulent discharge. Edema of the lids and often ulcerations of the cornea and loss of sight—highly contagious. Treatment: irrigation, silver nitrate solution and strong argyrol. Trachoma a very old disease historically, contagious and destructive to vision; acute and rapid, or insidious and slow in onset. Characteristic granular hypertrophies in and under the membrane with tendency to involve ocular conjunctiva and cornea—with later retrogressive stage of cicatrization and contraction and deformity of the lids. Treatment should include isolation and cleanliness with thorough removal of granulations, followed by stimulating antiseptics.

Paper: "The Early Diagnosis of Glaucoma, Iritis and Cataract," Dr. W. F. Hughes.

The characteristic clinical picture of acute glaucoma is so distinctive that the diagnosis is readily made from the history and an inspection of the eye. The dilated immobile pupil, steamy cornea, shallow anterior chamber, dusky ciliary injection corroborated by a hard eye ball make the diagnosis positive and easy.

Simple glaucoma must be diagnosed by the use of the ophthalmoscope to find the peculiarly distinctive cupped disk. The findings are corroborated by the history of a gradual failure of vision and the characteristically contracted field of vision.

The symptomatology of iritis varies somewhat in the different varieties, yet in the cardinal symptoms there is a distinct uniformity. The disease usually passes through the stages of lachrimation, photophobia, ciliary injection, fibrinous exudates on the surfaces of the iris as well as in the pupillary area with its characteristic adhesion between the iris and anterior capsule of the lens. Severe pain in the temporal region is usually a prominent symptom.

An increasing myopia in an individual past 45 is frequently a prodromal symptom of senile cataract. Whenever a history is given that a presbyope has discarded his plus glasses and that the "second sight" is coming on, the physician should be on the lookout for a beginning senile cataract. The objective examination shows a white or grayish white opacity immediately back of the pupil. In the beginning stages the ophthalmoscope shows the opacities as black dots or striae. This is the real diagnostic sign of beginning cataract.

Paper: "Minor Injuries of the Eye and Their Treatment," Dr. A. L. Marshall. In the absence of Dr. Marshall Dr. A. W. Brayton read his paper.

It seems marvelous that the eye is not more frequently the recipient of fatal accidents. That it is not, is due to its bony protection and the density of its protecting coats. Injuries to the lids are apt to produce undue apprehension because of the ecchymosis and edema. This is relieved by leaching and cold applications.

All incised and puncture wounds of the eye should be explored with the sterile fingers and probe to determine the presence or absence of foreign bodies. Wounds that parallel the palpebral fissure will ordinarily not require sutures. Those at right angles usually do.

Wounds of the conjunctiva rarely require surgical treatment as they heal readily and are surprisingly

free from infection. Where a foreign body is suspected to be present on the cornea, make the examination after instilling one drop of a 4 per cent. solution of cocaine. If found, remove with cotton applicator or spud. Bandage the eye and use 15 per cent. argyrol.

The action of burns and caustics are the same. Prognosis in these accidents should be guarded and depends upon the extent of the injury and the condition of the cornea. Atropin sufficient to keep pupil dilated and antiseptic ointment constitute the general treatment.

The density and location of scar tissue of the cornea determine the amount of vision in injuries to this part of the eye. The symptoms of injury to the cornea are severe pain, photophobia, lacrimation and the feeling of a foreign body. Pain is felt immediately and is increased by movements of the eye. Small wounds may be overlooked and should be stained with 2 per cent. fluorescein. Treatment is atropin in 1 per cent. solution and a bandage to the eye.

DISCUSSION

DR. B. J. LARKIN: Local agitation on trachoma is more important to the specialist than to the general practitioner. A diagnosis of folliculosis is made on many cases in which typical symptoms of trachoma are not found. Isolation is the rule. Some social aspects of trachoma are serious. Impairs ability for culture and employment. Children are periodically excluded from schools. In cases of follicular conjunctivitis use a 1 per cent. solution of silver nitrate. In Morax-Axenfeld infection use zinc preparations. In cases of foreign bodies use holocain both for relief of pain and antiseptis.

DR. J. O. STILLSON: Etiology of trachoma is unknown. For conjunctival and corneal ulcers an Illinois man uses a pasteurization method. Heat in close proximity to ulcers destroys infective organism. The irrational use of atropin is decidedly bad. Sometimes a glaucoma may arise in this manner. Be sure and make a diagnosis before using atropin.

DR. A. W. BRAYTON gave a historical review of ophthalmology in Indianapolis.

DR. E. A. WILLIS read a short extract from the *Journal of Surgery*, dealing with the treatment of injuries to the eye, as followed in the present European war.

DR. F. C. HEATH (closing): It is confusing to give too many points of differentiation to the man in general medicine. One prominent point for each condition is sufficient.

Meeting adjourned. Attendance 54.

Meeting of April 18

The meeting was called to order by the president. The minutes of the previous meeting were read and approved. The secretary read a letter from the Indiana Section of the American Chemical Society inviting the medical society to a lecture to be given by Dr. Charles H. Herty.

PROGRAM

Paper: "Diseases and Surgery of the Fifth Nerve," Dr. J. F. Barnhill.

Disease of the fifth nerve is very common in the practice of the otolaryngologist, who constantly deals with the many structures supplied by the nerve.

The chief cause of neuralgia of the nerve is infection and the infection most often arises from suppuration in one or more nasal sinuses, or from pressure to nasal growths and deformities. The teeth also are frequent causes when diseased or imperfectly repaired.

Surgery of the nerve trunks or of the Gasserian ganglion should not be attempted until a most thorough investigation of all the cavities of the head and of the teeth has been made, and all suppurative foci have been eradicated in so far as possible. Such treatment of the causes often brings about cure. Many cases of tic or even of severe neuritis will not yield after removal of cause. In such the nerve trunk should be injected with alcohol, should be removed throughout its course to the foramen of exit from the skull, or the Gasserian ganglion should be removed. Trivial surgical procedures directed against the nerve trunks, such as section of the trunk, or twisting the trunk away superficially, do no permanent good. Experiments of the writer on resection of the facial nerve of the dog proved rapid regeneration. Methods of nerve resection showing best plan of securing the nerve trunk and branches were given. Alcohol injections are indicated in the early stages of the disease, and in the old and decrepit. Such injections are not painful or extremely difficult to make but are not always certain and are not curative. Probably the best early palliative method of treatment. In long standing cases of tic resection of the sensory root of the Gasserian ganglion is the only certain means of relief. Cushing's method of ganglion resection is best and when performed after latest aseptic technic does not have high mortality.

DISCUSSION

DR. J. H. OLIVER: Rose of England, performed the first gasserectomy in 1890 but the patient died following the operation. In 1891 Sir Victor Horsley of England performed the first successful operation of this kind. Hartley and Krauss in our own country published almost simultaneously in 1894, reports of gasserectomies. The discussant cited a case in which he had removed a part of the third division of the fifth nerve with great relief to the patient. At the end of six months the pain returned and a second operation showed a completely regenerated nerve which was partially removed. This was followed by three months relief from pain. At the end of that period the patient returned and a third operation, this time Hartley-Krauss, was performed. The patient died of meningitis, three days after the operation. The younger Hutchinson maintains that there are no major neuralgias of the first division of the fifth nerve. They are all minor neuralgias. In the line of treatment some good results have been obtained with osmic acid injections. Minor neuralgias are very amenable to the alcohol treatment. One should use the superficial injections of alcohol a number of times before giving the deep injections. Deep injections often give excruciating pain. Meckel's ganglion does not play an important rôle in these neuralgias.

DR. A. E. STERNE: All facial neuralgias are not tic sensitif or tic douloureux. At the present time all measures are palliative and not curative. Diabetes ought to be mentioned as a cause of tic douloureux. Oleum Ricini affects favorably facial neuralgias and tic douloureux if oil is given early in routine manner.

It is not a cure-all but is quite worth the trial. Injection of quinin and urea hydrochlorid has given many favorable results. It is not necessary to inject the nerve itself. Only in severe cases is it necessary to do a division of the sensory branch.

DR. T. C. KENNEDY: The good effect of radium on neuralgias has been noted by Dewenter of Philadelphia. I have used radium in only two cases of neuralgia and that very recently. It seemed to give relief.

DR. KIRKPATRICK of Columbus, Ind., mentioned a case in which radium had been of apparent benefit.

DR. J. V. REED: In one or two cases I have encountered severe bleeding while injecting. Is there any danger of hemorrhage from the infra-orbital canal?

DR. BARNHILL (closing): Hemorrhage sometimes occurs in these cases but no fatalities have ever resulted. I think that Meckel's ganglion occupies an important position in connection with these neuralgias.

DR. A. W. BRAYTON read a paper on "Medicine and Philosophy," giving a review of the lives of Sydenham, Locke and Browne, and also noting their influence upon the literary and medical accomplishments of that period in England.

Meeting adjourned. Attendance 92.

Meeting of April 25

The meeting was called to order by the president at 8:15 p. m. The minutes of the previous meeting were read and approved.

Under miscellaneous business Dr. Gabe moved that the secretary be instructed to send a letter to Dr. Lindemuth extending to him the sympathy of the medical society, on account of the death of Mrs. Lindemuth. Dr. Pantzer seconded the motion and it was carried unanimously.

PROGRAM

Symposium on Dysmenorrhea.

Paper: "Etiology and Pathology," Dr. G. B. Jackson.

Dysmenorrhea is a symptom, not a disease.

There is no condition which is invariably accompanied by dysmenorrhea nor is there any condition which occurs without exception in cases of menstrual pain. The most prominent phase of the menstrual function is congestion.

Etiology.—We know that 50 to 80 per cent. of American girls have dysmenorrhea. That more than 75 per cent. of the cases of painful menstruation are not dependent upon anatomical causes.

Etiologic classification: 1. Functional or non-anatomic; 2. anatomic causes.

The former may in turn be subdivided into (a) secretory or ovarian, (b) vagotonic or neurotic.

Discussion of the secretory type and relation to hormones. Discussion of the vagotonic type.

In virgins there is usually more than one factor active. The neurotrophic form, obstructive (cervical stenosis and antelexion) and hyperesthesia are usually combined.

The marked effect of pregnancy and parturition in these cases points strongly to its being largely a nutritive disturbance.

Dysmenorrhea due to anatomic causes: 1. The obstructive; 2. the inflammatory.

Discussion of anatomic and pathologic factors and citation of a few unusual causes.

Paper: "Diagnosis and Indications for Treatment," Dr. T. B. Eastman.

It will be not far from the truth to say that there are almost as many classifications of dysmenorrhea as there are so-called authorities on the subject—some based on one thing, some on another—but all based more or less on the supposed actual pathological condition which lies at the bottom of the disorder. And as classification of the subject under discussion offers a free field, for the purposes of this paper I shall make bold to classify the various forms of dysmenorrhea under what you may feel are rather fanciful heads, to wit: intangible and tangible dysmenorrhea.

By intangible dysmenorrhea I mean that form which for the most part occurs in girls and young women—that form which occurs in the hesitating establishment of puberty wherein a most careful examination fails to disclose anything of a pathologic nature although the pain in these cases is most excruciating. It is true there may be an active congestion of the generative organs neither determinable nor demonstrable. These are the conditions which so often follow "catching cold." Or it may be that they are of the type which some authorities characterize as "neuralgic," but this is no diagnosis so far as I am concerned for I do not know what neuralgia is although I have not been altogether remiss in my efforts to learn.

As tangible I refer to those cases wherein one can literally lay fingers upon the cause in making up his diagnosis. In tangible dysmenorrhea we base our diagnosis upon the pathology found in ovaries, tubes and uterus. We have dysmenorrhea classified with certain constitutional diseases but I am quite sure that in such circumstances a more careful investigation would discover some lesion in the generative organs.

We are told by the textbooks that a differential diagnosis of the variety of dysmenorrhea at hand may be determined by the time of onset of the pain, i. e., whether it appears before the flow and subsides with its appearance, or during the flow, or after it ceases. Also we are told that a pain which ceases with the establishment of the flow is due to a flexed cervix and that pain that continues during the flow is due to ovarian disease. These points of differential diagnosis are not to be depended upon. At least that is my experience.

In short, the diagnosis in dysmenorrhea consists in locating the cause, if possible.

Paper: "Treatment," Dr. O. G. Pfaff.

On account of the absence of Dr. Pfaff, Dr. Eastman read his paper.

When dysmenorrhea is the result of local conditions such as fibroid tumor, flexion, old inflammatory conditions, etc., the removal of these conditions usually results in cure. When a stem is used for dilatation the mistake is often made of removing it too early—from two to six months being a reasonable time to effect a cure.

Leitz, Winz and Fingerhut investigated the biologic function of the corpus luteum and its chemical constituents, and their therapeutic employment in certain irregularities of the menstrual function. They show experimentally that menstruation is dependent upon the function of the corpus luteum. This contains two substances: (1) luteo-lipoid, which pos-

sesses antihemorrhagic properties, and when injected subcutaneously before or during menstruation, serves to diminish and shorten the hemorrhage; (2) lipamin, a lipo-proteid, namely a lecithin-albumin. In animal experiment, it caused an accelerated growth of the genitals.

In women with amenorrhea, menstruation can be induced through subcutaneous injection of lipamin. Luteo-lipoid and lipamin are antagonists and in proper balance regulate the course of menstruation. Therapeutically, injections of lipamin before the menstrual period seem to be capable of relieving and removing the pain of dysmenorrhea when associated with a scanty flow of blood.

In dysmenorrhea associated with profuse hemorrhage, luteo-lipoid exerts a favorable effect upon the accompanying pain. Very satisfactory results are obtained with injections of luteo-lipoid, before and during the menstrual period, in these cases. The injection is usually applied in such a way that about 2 mm. are injected daily, subcutaneously, until the desired effect has been obtained, the necessary dosage varying widely.

Frequently dysmenorrhea is associated with scanty menstruation, especially in young girls. I have seen marked benefit in these cases from the use of the preparations of corpus luteum now on the market.

DISCUSSION

DR. T. B. NOBLE: Dysmenorrhea is of varying intensities, mild and severe in type. Noble of Philadelphia, designates a hypoplastic class of individuals who are subject to this symptom on account of faulty development. Extremely severe and prolonged cases can only be relieved by surgical procedures which will entirely do away with menstruation. In milder cases in which the organs are normally developed other measures are valuable. The stem pessary is the best treatment. Many men advise against the use of the stem, but personal observation does not bear this out. Stem is for relief, not cure. The cure is often found in a pregnancy.

DR. H. O. PANTZER: The salient feature of the essays and the discussions following them may be given in the phrase repeatedly employed tonight—namely, that “dysmenorrhea is a symptom, not a disease.” Symptomatic treatment is unscientific and often disappointing. Recent successful efforts to scientifically explain menstrual function. Schroeder of Rostock had an illuminative article in the *Centralblatt für Gynäkologie*, Oct. 17, 1914, entitled “Anatomy and Pathology of the Menstrual Cycle.” It gives a study of 709 cases and reveals conclusively the factors active in menstruation. Schroeder recognizes two specific chemical agents arising from each of the ovary and the endometrium with an interrelated effect upon the processes of ovulation and menstruation. Endometrial menstrual change was never present in cases where the corpus luteum of the early stage was wanting, that is to say, the former is dependent upon the latter. Further evidence in that the injection of ovarin causes premenstrual congestion.

Menstrual cycle is divided into: 1. A proliferative phase, temporarily expressed by the fifth to the fifteenth day. 2. A secretory phase, fifteenth to the twenty-fifth day. 3. A desquamative and regenerative phase, the first to the fifth day.

Schroeder found that 139 of the 709 cases showed inflammatory changes. Further that severe inflammatory excitation may effect the proliferation, so that though ovulation and corpus luteum production occur, yet the secretory stage fails to appear. If infection strikes endometrium at desquamative stage, the proliferative phase may fail to develop. Rosenow and Davis (*Jour. A. M. A.*) show that infectious diseases give rise to infections in the ovary. The next menstruation then seems to cause a renewal of the infection in those areas which were previously affected.

DR. G. B. JACKSON (in closing): The cause of the pain obtaining in this condition has not been revealed tonight. We are all in need of more light on this subject.

DR. O. G. PFAFF (in closing): Karsten of Detroit has been most active in the use of the stem for this condition. The stem treatment is rather an indiscriminate treatment, but it gives many good results. Free divulsion and a large stem to maintain the dilatation are the points to remember.

Meeting adjourned. Attendance 92.

Meeting of May 2

The society met with the state health commissioners at the Claypool Hotel Auditorium. The meeting was called to order by the president at 8:15 p. m. The minutes of the previous meeting were read and approved.

The secretary announced the reviewing of Dr. F. C. Warfel's account with the Indiana Refrigerating Company, payment of which account was denied by the insurance company. Dr. Warfel's account was recommended to the society as a reasonable account by the Accounts Review Committee. Dr. Kitchen moved that the report of the committee be accepted; seconded by Dr. Erdman. Motion carried.

Dr. Charlton moved that the Indianapolis Medical Society donate \$50 to the State Park Fund. Seconded by Dr. T. B. Noble; motion carried.

Dr. Wynn moved that the secretary be instructed to write a letter to the family, expressing the grief of the society at the death of Dr. A. O. Ward. Also that the council take appropriate action. Motion seconded and carried.

PROGRAM

Symposium on Cystitis.

Paper: “Cystitis Due to Infections,” Dr. B. Erdman.

Paper: “Cystitis Due to Obstruction and Foreign Bodies,” Dr. W. P. Garshwiler.

The author gave the principal causes of obstruction from childhood to old age. He called especial attention to the hypertrophy of the bladder muscle in these conditions and the necessary early diagnosis and correction or operation. The treatment is wholly mechanical. These conditions all end in infective cystitis if untreated.

Paper: “Bladder Symptoms Due to External Causes,” Dr. H. G. Hamer.

Because of its anatomical relations the bladder comes in contact with organs and tissues either in abnormal position or diseased condition which cause disturbance of its function. In the male, the rectum, prostate and seminal vesicles; in women the uterus, fallopian tubes and ovaries; in both sexes the intestines, the appendix and omentum may inter-

fere with bladder function, giving rise to congestion predisposing to cystitis. The symptoms are frequency of urination, pain, tenesmus, difficulty, retention and incontinence. These symptoms are not relieved by ordinary measures. When a correct diagnosis is made they are generally cured by appropriate operation or other corrective measure.

Uterine displacements, pelvic tumors, pelvic inflammations and adhesions, diseases of the fallopian tubes, appendix, omentum, intestines and rectum should be included in the variety of causes.

Improperly performed operations for the correction of pelvic disorders in women may be the cause of disturbance of bladder function.

The cystoscopic appearances in this class of cases are mainly those of distortion and sacculcation of the bladder and varying degrees of hyperemia.

The only way to treat functional bladder trouble is to correct if possible the cause: a displaced uterus must be replaced and retained in its normal position; a diseased uterus must be cured; rectal trouble relieved and pelvic and abdominal conditions disturbing bladder function must be corrected.

Paper: "Hitherto Undescribed Condition of the Female Bladder." Lantern Slides. Dr. F. R. Charlton.

There is a form of cystitis in old women hitherto inadequately described, that is believed to be a distinct clinical entity. It is very common. It appears soon or late after the menopause, being somewhat variable and essentially chronic in its course. The cystoscopic picture varies, but commonly presents during exacerbation, a bullous edema, a patchy vesicular rash, which I have been arbitrarily speaking of as a "measle." This is transient and disappears with the subsidence of the acute attack, leaving a smooth but apparently pigmented and ecchymotic appearance in the interval. The question of infection is undetermined and the histo-pathology not studied. We believe it to be almost wholly a senile change due to atrophy of underlying connective tissues, atrophic changes that may lead to ulcerations with accompanying mixed infection. Vigorous curative efforts are not approved of since the condition is hardly possible of eradication. Milder measures of treatment such as irrigations and instillations are advised, with pure liquid guaiacol internally. This drug is almost specific in its action, given in doses of 5 to 10 drops after meals.

Lantern slides.—Reproductions from cases illustrating bladder and rectal lesions as seen by cystoscope and proctoscope.

DISCUSSION

DR. P. E. MCGOWN: The consideration of the subject cystitis and its allied diseases practically means the discussion of urology as a whole, since the bladder is the center of the urologic solar system. Cystitis per se is a rare disease—it is almost always secondary to other urologic or genital affections. It may rarely occur by the hematogenous route in cases in which the natural resistance of the bladder is lowered by trauma or exposure. It is my custom when bladder symptoms present, to eliminate the kidney and genital symptoms if possible before direct examination (cystoscopic) of the bladder is attempted. In women all conditions mentioned by Dr. Hamer are considered. In men, urethritis, prostatitis, seminal vesiculitis and

tuberculosis of the testicle are to be eliminated. Palpate for kidney tenderness. The cystoscope, stone searcher or catheter may reveal pathology if above methods give negative results.

Pus in urine is indefinite. However, if found in conjunction with inflamed prostate, seminal vesiculitis or tender kidney, it may be diagnostic. In the absence of the symptoms above named, a cystoscopic examination is in order. This will reveal stone, new growth, introvesicle enlargement of prostate, solitary ulcer or syphilis of bladder, the latter to be confirmed by a Wassermann and the history.

Diverticula, according to Kelly are congenital. The later belief of urologists is that they are caused by some obstruction. The symptoms at times are those of a severe cystitis.

The treatment in addition to the palliative, consists of general and local medication together with the removal of existing causes such as obstructions, misplacements, foreign bodies and tuberculosis of the kidneys and testicles.

DR. F. B. WYNN: Intractable cystitis in elderly women is common. Changes in the bladder mucosa are paralleled by skin changes in old persons. The underlying pathology is an arteriosclerotic change in the capillaries.

DR. T. B. NOBLE: Acute appendicite infections, in those cases in which the appendix lies in the pelvis, are apt to be ushered in by bladder symptoms. Dysuria may be a symptom of ruptured tubal pregnancy. Blood coming in contact with the peritoneum is the cause. In cases of difficult parturition, when anterior vaginal wall with bladder and urethra become cyanotic from pressure, malpositions occur which result in dysuria.

DR. HAMER (in closing): I want to call attention to the value of functional rest of the bladder in the treatment of chronic cystitis.

Continuous drainage of the bladder by means of a retained catheter has become a well recognized method of preparatory treatment preliminary to operation in cases of hypertrophied prostate with cystitis; not only for the betterment of the bladder condition but as well for its good influence upon the function of the kidneys. In chronic cystitis in women, functional rest by catheter drainage is equally beneficial and constant drainage of the bladder by means of a vaginal cystotomy will often give relief where all other measures have failed.

In severe tuberculous cystitis the prompt and complete relief from bladder symptoms is often very gratifying.

Meeting adjourned.

Meeting of May 9

In absence of the regular officers of the society, Dr. James H. Taylor was asked to preside. The minutes of the previous meeting were read and approved.

PROGRAM

Paper: "The Physiological and Toxic Action of Formaldehyd—With a Report of Three Cases of Poisoning by Formalin," Dr. S. E. Earp.

The chemistry of formaldehyd was given in detail and also its toxic effects. In speaking of physiological chemistry attention was called to the Sorensen titration method and how formaldehyd unites with

the amino groups to form methylene derivatives and these changed to methylamines. As a source of methylation it was said that formaldehyd is an intermediary product. This cannot be considered positive until we know of the undoubted presence of formaldehyd in animal tissues. The liver and muscles have the most important rôle in carbohydrate metabolism and in the consideration of this subject this is an important factor. The cases of poisoning by formalin were given as follows:

Case 1 was a man who had taken $1\frac{1}{2}$ ounces of formalin mistaking it for whisky. In an hour there was cyanosis, white mucous membranes of mouth, temperature 97 F., pulse 60 and irregular, respiration 20. The treatment consisted of milk of magnesia and aromatic spirits of ammonia and lavage. Later all portions of the body were cyanotic in an apparent moribund condition, pulse could not be obtained and thermometer did not register in the rectum. There was a mitral murmur. Vomited matters contained blood. Cheyne-Stokes breathing was noted an hour later and evidence of edema of the glottis. Digitalone, spartein sulphate and strychnia sulphate were given hypodermatically at intervals. On the evening of the third day patient could take nourishment by the mouth but was still cyanotic but no heart murmur. After the fourth day the condition of the patient gradually improved and recovery took place. The second case responded promptly to similar treatment, but had only taken half an ounce of formalin. The symptoms were not pronounced. The third patient, a nurse (who had been the attendant of a patient who had put bichlorid tablet of mercury in her vagina, causing death), during a state of depression attempted suicide by taking 2 ounces of formalin. It was taken on a full stomach and treatment commenced forty minutes later. Symptoms were mild compared with the first patient and recovery took place in ten days.

Case Report, Dr. C. H. McCaskey, Transplantation of Bone and Cartilage for the Correction of Nasal Deformity.

George M., aged 9. Family history negative; social history, school boy; previous history, two years ago fell from swing striking nose upon sharp edge of the arm of swing. Injury consisted of depression and spreading of nasal bones; also deflection of the septum to right of both bony and cartilaginous portion. There was an infection at the time of injury and the anterior portion of septal cartilage was destroyed, allowing tip of nose to fall forward upon lip. Special complaint, mouth breathing and muco-purulent discharge from anterior nares. Laboratory findings negative. Treatment surgical. First did a submucous resection of the septum, under ether anesthesia, which remedied the mouth breathing and discharge. Two weeks later, under ether anesthesia, the transplant of bone and cartilage was made. The bone and cartilage were taken from the external surface of the right seventh rib, including periosteum. A transverse incision one half inch wide was made in the inter-canthal area, and skin was dissected loose as far as tip of nose—also laterally allowing as little tension as possible over the transplant; the cartilage and bone being introduced through this. There was no complication other than a slight ecchymosis. The patient left the hospital at the end of two weeks, at that time the wound was completely healed and no evidence of inflammation.

I wish to thank Dr. Ross for the removal of the section of rib and cartilage and Dr. Nolting for the anesthesia.

Case Report, Fracture and Dislocation of the Vertebra Without Cord Injury, Dr. Paul F. Martin.

Case Reports, (1) Traumatic Rupture of the Intestines; (2) An Unusual Number of Gallstones, Dr. E. E. Padgett.

Traumatic Rupture of the Intestines. Male, aged 19, no history of gastric or intestinal disease. Was brought to City Hospital in semi-comatose condition following injury by being struck by locomotive. Slight scalp wound, left ilium fractured, right ankle bruised. Abdomen hard and gives dull note clear across up to level of umbilicus. Pulse 90, full and regular. Hardness over abdomen extended. Complaints of great pain in abdomen. In view of hemorrhage having stopped and the hardness in the abdomen continued, a diagnosis of rupture of the intestine was made and the abdomen opened. A large amount of bloody fluid too thin for normal blood and entirely without clots escaped. Liver, spleen and kidneys, diaphragm and stomach explored and found normal. No rupture of peritoneum at the site of injury to hip. The small gut was then run beginning at the stomach and proceeding downward. Showed evidence of recent dilatation. Otherwise normal until reaching a point two and one half feet above ileocecal valve at which point was found an opening into the gut on the side opposite mesentery and large enough to insert the tip of the index finger. This opening was closed by three layers of sutures, catgut in mucosa and linen in serosa. Drainage tube inserted and remained in place four to six days.

Patient had stormy convalescence having developed diarrhea, subsequently pneumonia and later a small slough in the wound. No fecal fistula developed and no peritonitis. Patient now is out of bed and in good condition.

An Unusual Number of Gallstones. Mrs. L., aged 52 years; had diseases of childhood; no serious sickness in past history; no history of typhoid fever, stomach or bowel disturbances; has had five living children and four miscarriages; menses began at 15, menopause at 47.

First symptoms appeared on Monday before operation on Friday. Slight pain in the abdomen, gradually getting worse for two or three days when it became necessary to give morphin on account of pain. Never any pain of gallstone character; slight nausea and rather obstinate constipation; on examination found a tumor in the right side somewhat below the level of the umbilicus. Tumor firm and movable. Diagnosis probably ovarian cyst.

On opening abdomen through the right rectus, pelvis was found to be normal; fundus of tumor presented at incision and it was determined that its point of attachment was in the upper abdomen. Tumor was slightly adherent to the under surface of the liver, from which it was dissected away without difficulty. Tumor was firm, tense and apparently had thick walls. Was found to be gallbladder enlarged to the size and taking the shape of a milk bottle. Gall bladder was amputated at cystic duct and removed. The sac contained large amount of brownish red fluid and 953 gallstones of varying sizes. Patient had an uneventful recovery.

Attendance, 64.

Meeting adjourned. L. H. MAXWELL, Secretary.

THE MUNCIE ACADEMY OF MEDICINE

Meeting of April 28

H. D. Fair gave a lecture and demonstration on the "Complications of Labor," saying: If you forget everything else I may say tonight I beg of you to remember this one axiom: Every move in complicated labor should be an elective procedure and not an action of last resort. How often each one of us have been called on the spur of the moment to be confronted by a complication which could easily have been prevented if we had had twenty-four, twelve or even three hours' warning. In consulting my records I find that the operations most frequently performed were (1) the applications of forceps; (2) the correction of faulty presentations; (3) repair of perineal lacerations; (4) manual dilatation of the cervix for one reason or another; (5) postpartum hemorrhage; (6) manual extraction of placenta; (7) replacing a prolapsed cord; (8) bringing down an extended arm or arms in breech presentation; (9) management of placenta praevia; (10) treatment of eclampsia. 1. I find that I have used forceps rather frequently; maybe I have not exercised sufficient patience, but I always thought that when the way was clear, the cervix sufficiently dilated and no obstacle to delivery except inertia or inability of some sort on the part of the mother, forceps were indicated; and believe when properly applied and used, will do no harm either to the mother or child. 2. I believe I have spent more time and really anxious moments over occipitoposterior presentations than all other malpositions combined. I wish to demonstrate a simple method of converting posteriors into anteriors, which is easy to perform when once understood. 3. I usually repair the perineum while waiting for the placenta. I plug the vagina with cotton or gauze, take the necessary stitches, leaving the ends long and untied till after the expulsion of the placenta. 4. I have used manual dilatation in eclampsia; in the rigid cervix of elderly primipara, in placenta praevia and when because of early rupture of the membranes the presenting part was not in contact with the os. I occasionally use a rubber bag but ordinarily prefer my fingers. 5. Probably the most spectacular and effective play I ever made in an alarming postpartum hemorrhage was when I shoved a hastily gathered and compact snowball into a big quiescent uterus. The effect was instantaneous. Ice is very good, so is the table vinegar found in any household. 6. Adherent placenta. In each instance I waited a reasonable time and tried external manipulation, and in each instance I found it difficult to insinuate my fingers between the placental mass and the uterine wall, indicating that my procedure was justifiable. 7. Prolapsed cord. I here show you a repositor made of a piece of clock spring with a soldered tip. This used in conjunction with the Trendelenburg or knee-chest position has always been successful. 8. Once in a while in a breech or footling presentation the arm becomes extended over the head. This is not an easily corrected accident. I have never succeeded in doing it in a primipara without an episiotomy. After making sufficient room I bring down the posterior arm, attach a fillet, then shove the head up into the abdomen, turn the body entirely over, bring the former anterior arm into the cavity of the sacrum and deliver it with

the body. 9. Placenta praevia. I believe when a woman has lost all the blood she can safely spare, when there is no effacement, and the cervix seems rigid, and the prospect of a tedious labor is apparent, cesarean section should be done if the proper operator is within reach. As I said before, this should be done when conditions are right and while the probabilities of good results are fair. 10. Eclampsia. My method of dealing with antepartum eclamptic convulsions, occurring at or about full term, is to promptly empty the uterus. My favorite drug is veratrum viride. It is good practice to bleed a plethoric woman; sometimes this alone will end the convulsions. It is understood that steps toward prompt elimination are taken in each instance. The treatment of shock following postpartum hemorrhage is sometimes an important item. I believe the administration of strychnin in this condition is not only useless but absolutely harmful at times. Adrenalin chlorid and atropin have given me the best results of any drugs used. In my limited experience I have had one anencephalous monster. One case of extreme spina bifida which ruptured during delivery. One of my labors was complicated by polypus the size of a hen's egg. The woman was a multipara and had been in labor for perhaps twenty hours with head not engaged. The polypus was about half outside the external os and had a tough pedicle which I severed without ligation. Following delivery there was no sign of any trouble due to the stump, so I gave it no further attention.

Adjourned.

Meeting of May 12

The regular meeting of the Muncie Academy of Medicine was held in the Muncie Y. M. C. A. building Friday evening, May 12, and was called to order at 8:15 by President O. E. Spurgeon.

O. E. Spurgeon read a paper on "The Practice of Medicine as a Business," saying in part: Every man is confronted by the same proposition, "What shall we eat, or what shall we drink, or where withal shall we be clothed?" Are we entitled to a living, in exchange for our efforts to prolong life and to relieve suffering, or are we unworthy of our pay? The preparedness of the doctor must necessarily include native ability, good health, a good general education and a good medical education: but it does not follow that a man is prepared to do medical work and to compete with his competitors unless he keeps abreast with the times. A doctor does not need to be old in order to be a back number nor does it follow that because a doctor is advanced in years that he is not up in modern methods. We are all acquainted with young men, graduates of good schools, who cannot make a blood count or do a urinalysis, while some of our older men are well up in modern methods. Besides being well educated the doctor should be reasonably well equipped. He should have sufficient books, instruments and laboratory equipment to do the kind of work he attempts to do. In this business as in other kinds of business the old adage holds good—"Honesty is the best policy." But unfortunately not all physicians make it their standard to deal honestly and squarely with their patrons. No one claims that doctors, as a class, or that any one doctor, as an

individual, has obtained moral perfection and is therefore perfectly honest. The Apostle John says "If we say that we have no sin we deceive ourselves and the truth is not in us." In other words, we lack perfection. The question of honest service resolves itself into diligent conscientious effort to prolong life and to relieve suffering, carried out to the best of our ability. The physician should charge the patient a reasonable fee. It is as unfair to charge too small a fee as it is to charge too much. If you charge too much you take the man's money without giving him an equivalent service, if you charge too little you cripple your own efficiency so that you cannot render such service as is reasonable to expect of a well equipped physician. No one can render honest service who is not qualified by education and equipment to render real service. People not only want good service but also courteous treatment. Politeness is a valuable business asset. Sometimes doctors talk discourteously about each other. This attitude is so small and so foolish that it is to be hoped that at least the better educated physician will entirely abandon it. The good of one is the good of all.

Adjourned.

Meeting of May 19

G. R. Andrews spoke for a few minutes on "The Diagnosis of Pregnancy" and its associated difficulties. Most any old lady can readily tell when her neighbor is in the "family way," yet the physician knows the first positive sign of pregnancy is the tangible presence of the embryo in the uterus. Previous to this the most reliable sign is the evidence of a soft doughy cervix; thin lower uterine segment and globular body. All other presumptive signs may be found in conditions other than pregnancy. The correct diagnosis is a matter of grave importance to the abdominal surgeon.

In the discussion O. E. Spurgeon emphasized the importance of uterine contractions as an early sign, i. e. before quickening. These rhythmic movements can be detected through the abdominal wall in the patient not obese.

C. E. Sellers told of the difficulty in differentiating between normal pregnancy and a hydatidiform mole, and cited one instance where the diagnosis alternated several times as pregnancy advanced.

C. A. Ball read a brief abstract from Dr. E. P. Joslyn's paper on diabetes, published in a recent number of the *J. A. M. S.* in which he asserts that sugar is removed by fasting, then if care in diet is exercised the condition may be kept under control. Acidosis is more important than glycosuria. Acidosis is due to the ingestion of surplus fat. The death of a diabetic patient may be due to one or more of a number of other causes, and it is well that glycosuria is being recognized more and more as a symptom rather than a disease.

Adjourned.

Meeting of May 26

F. E. Hill read a paper on "The Diagnosis of Presentations," from which the following was abstracted: In determining the presentation of the fetus, three things must be considered, the bony pelvis with its diameters and planes, the position the child naturally assumes, and the diameter of the fetal head. In utero the fetus assumes a position of universal flexion, ovoid

in shape, occupying the least possible space, and having a convex (spinal) side and a concave (abdominal) side. The cephalic end of this ovoid is of lesser dimensions than is the pelvic end. From the obstetrician's view point the head is the most important part of the fetus and presents the greatest problem in labor. The head presents itself in the planes with the occiput either to the left or right of the symphysis pubis, accommodating itself to the various axes of the pelvis. The L. O. A. being by far the most common is considered normal. As the head descends if there be any degree of extension on the axis of the body, we get a brow or face presentation. The various types of transverse presentations are resolved by nature or the art of the obstetrician into cephalic or breech. Presentations are diagnosed by means of both external manipulation and vaginal examination by aid of the cranial sutures and the fontanelles. Theoretically it is simple, but in practice sometimes difficult, for both sutures and openings may be distorted.

W. W. Wadsworth: I believe transverse presentations are usually due to a large relaxed uterus, deficient in tone. The normal pregnant uterus with its contractions will compel the egg shaped fetus to accommodate itself to the pear shaped interior, which means cephalic presentation.

C. A. Ball: I believe the most satisfactory way of determining the presentation of the fetus is by learning the exact location of the back. If this is done one may be certain of the presentation.

G. R. Andrews: I find that by sweeping the finger around the fetal head and identifying the parietal bosses, I am enabled in most cases to accurately determine the presentation as well as the relation of the fetal head to the bony pelvis.

F. W. Dunn read abstracts from current literature on the relation of mouth infections to systemic disorders, dwelling particularly on pyorrhea alveolaris and its successful treatment by derivatives of ipecac, and a preparation of mercury.

Adjourned.

H. D. FAIR, Secretary.

SOCIETY FOR THE PREVENTION OF TUBERCULOSIS

May 24, at a joint meeting of the Indiana and Marion County Societies for the Prevention of Tuberculosis, held at Indianapolis, a committee was appointed to study the bills which are to be presented to the 1917 Legislature. Named on this committee were: Mrs. Jaquelin S. Holliday, Indianapolis; Mr. Bowman Elder, Indianapolis; Mr. Joseph Hayes, Indianapolis; Mr. Jack Henley, Indianapolis; Mrs. Ella B. Kehrer, Anderson; Mr. Leo Kominski, Indianapolis; Mr. E. E. McFerren, Indianapolis; Prof. L. J. Rettger, Terre Haute; Dr. R. L. Sensenick, South Bend; Dr. Henry B. Shacklett, New Albany; Mrs. Evans Woolen, Indianapolis; Mr. Joseph H. Wooling, Indianapolis; Dr. Alfred Henry, Indianapolis, ex officio; Prof. Severance Burrage, Indianapolis, ex officio.

Of importance among other items of business transacted was the passage of the following resolutions in honor of one of the pioneer anti-tuberculosis workers of Indianapolis:

RESOLUTION

WHEREAS, Dr. W. T. S. Dodds has been suddenly taken from us; and

WHEREAS, He was vitally interested in the study and eradication of tuberculosis and was instrumental in founding the first tuberculosis clinic in this city; and

WHEREAS, He devoted much of his time and money to the anti-tuberculosis campaign; be it

RESOLVED, That we, the members of the Executive Committee of the Indiana Society for the Prevention of Tuberculosis and the Marion County Society for the Prevention of Tuberculosis, in joint meeting, deplore his untimely death, which is a great loss to this community and particularly to the anti-tuberculosis cause; and be it

RESOLVED, That we extend to his family the sincere sympathy of the societies which we represent.

INDIANA SOCIETY FOR THE PREVENTION OF TUBERCULOSIS, SEVERANCE BURRAGE, President.

MARION COUNTY SOCIETY FOR THE PREVENTION OF TUBERCULOSIS, ALFRED HENRY, M.D., President.

DELAWARE COUNTY

Meeting of May 5

Regular meeting of Delaware County Medical Society was held in Muncie Y. M. C. A. building, Friday evening, May 5, and was called to order at 8:15 by President C. A. Ball.

Dr. W. A. Hoskins, Indianapolis, read a paper, "Some Feeding Problems in Early Infancy," saying in part: While breast feeding is natural, safe and often easy, it is at times difficult and subject to misuse; taxing the skill and patience of the most careful and experienced; but it is safe to say that a physician or family who is unable to raise a baby on natural milk will fail when artificial diet is tried. To wait till a baby is born in order to start investigation and planning for his milk supply it not right. Preparations should be started in early pregnancy with attention to the nipples, breasts and diet. Breast feeding is worthy our best study. As a hobby it is most deserving. It is in line with modern scientific preventive medicine, worthy of professional enthusiasm. Baby feeding is not a job for the specialist but for the family physician. Mother's milk contains some subtle and essential element, besides food, that is lacking in all substitutes. I believe the three hour interval will be satisfactory in the large majority of instances, some may need shorter and some will do better on longer. During the day a baby should be awakened every three hours to nurse, and at night be allowed to sleep as long as he will. When the mother's supply of milk is scant it should be supplemented by the addition of cow's milk or a suitable substitute, but every ounce of mother's milk should be utilized. A baby may tolerate milk with a high fat content or an excess of protein, but hardly when there is an excess of both. The addition of tepid water to a baby's diet is beneficial in many instances where there are digestive disturbances. It may be taken from a bottle before and after being put to the breast. The weaning period is a crisis in a baby's life and should be a gradual process. Only severe disease on the part of the mother should permit this before the sixth month. The proper age allows considerable latitude; probably weaning after one year is preferable to an earlier date. Crying is more common in overfed than in underfed babies. Eczema is one of the results of over feeding.

Adjourned.

H. D. FAIR, Secretary.

GREENE COUNTY MEDICAL SOCIETY

The Greene County Medical Society met in Worthington, May 11, at 8 p. m., with President A. A. Thomas in chair.

Minutes of April meeting read and approved.

Dr. J. W. Clifford of Worthington was elected delegate.

Dr. T. R. Bass of Indianapolis was introduced by the president and he read a very interesting and forceful paper on "Prostatectomy."

Dr. H. R. Isenhower, Dentist from Bloomfield, presented a paper on "Aural Infection and Its Relation to Systemic Diseases." This paper was very interesting and brought out the fact that physicians and dentists must get in touch with each other for the betterment of humanity in general.

The next meeting will be held at Bloomfield on June 15, at 8 p. m.

Adjourned.

HARVEY S. COOK, Secretary.

NOBLE COUNTY

Noble County Medical Society met at Ligonier, Tuesday, May 23, and had as their guest Dr. T. C. Kennedy of Indianapolis.

The meeting was called to order at 1:30 by President J. W. Morr.

Paper on "Cancer" by Dr. T. C. Kennedy, and another paper on "Medical Fees," by Dr. J. L. Gilbert, Kendallville, constituted the program.

W. F. CARVER, Secretary.

SPENCER COUNTY

Spencer County Medical Society met in regular session at office of Dr. H. Q. White, Vice President C. W. Bradley, presiding.

Minutes of last meeting read and approved.

Dr. Bradley read a paper on Puerperal Eclampsia. In part he said it was a rare thing—only about one in every five hundred cases. Since being so rare a case doctors are not often expecting trouble in this line. In removing fetus, the offending foe, we often do a great deal of harm. High blood pressure is noticed early in toxemia of pregnancy. Some advise to take no note of a blood pressure of 125, but when it reaches 150 we should be ready to remedy the trouble. Should know the amount of urine passed in twenty-four hours, and the acidity. Digitalis not good because it raises blood pressure. Lettuce salad is good to use. Use chloroform during seizure, hot packs for sweating. Nitroglycerin lowers blood pressure. High enema of colon is good.

Adjourned.

H. Q. WHITE, Secretary.

VIGO COUNTY MEDICAL SOCIETY

Meeting of April 11

A paper by Dr. A. H. Caffee, "Sodium Bicarbonate in Eclampsia," was read. This paper referred especially to a series of eleven cases in his practice, covering a period of the last two years, making a special report of three cases. All the cases treated by this method terminated in good results. The solution was used in two ways: First, a 1 per cent solution of

sodium bicarbonate intravenously; and second, a 1 per cent. solution of sodium bicarbonate, with 1 per cent glucose, and 50 gr. chloral hydrate to the quart of water per rectum through a Murphy tube, the theory being that eclampsia or the toxemia of pregnancy is due to the absorption of toxic substances into the blood stream from the placenta, and that it causes an acidosis, and this solution overcomes to a certain extent this condition and also helps to neutralize the other toxins in the blood stream. All the symptoms common to pregnancy, such as nausea, fainting, fatigue, headache, vomiting, epigastric pain, pruritis, tremors, melancholia, hyperemesis gravidarum, nephritis and acute yellow atrophy of the liver are all due to toxins in the blood stream. In acute yellow atrophy the blood pressure is low and this condition nearly always terminates fatally. The liver and kidney are often both affected and it is due to these toxins being absorbed. Whenever these symptoms point toward the kidney they should be treated as nephritis and should be very carefully watched from the beginning, but even then all the complications cannot be prevented. Every pregnant woman should be under the watchful care of a competent physician, and all the symptoms of toxemia should be carefully watched and at the beginning of tremors delivery should be done at once. Cesarean section is indicated if in primipara with cervical stenosis. The cases should be kept quiet, on liquid diet, and the free use of salines. In the majority of these cases the blood pressure is high and in the most severe ones remains high even after delivery. Paper discussed by Drs. Kutch, C. N. Combs, Mattox and Jett.

Dr. Price was a visitor. Twenty-one were present. Adjourned.

Meeting of April 18

A paper by Dr. E. A. Weir, "Diagnosis and Results," was read. The writer said that our patients expected and ought to receive results when they sought our services, and that while we ought to use all the means possible at our disposal and make a sincere attempt to diagnose the disease correctly, that so long as we got results we were serving our patients best. That we should be conservative in urging surgical operations in obscure conditions or when the promise of fees would be greater than if conservative methods were used honestly. Paper discussed by Drs. Weinstein, Jett, Shaeffer, M. R. Combs and D. B. Miller.

Twenty-one were present.

Adjourned.

Meeting of April 25

A paper by Dr. M. R. Combs, "Fractures of the Skull," was read. Fractures of the skull constitute almost 3 per cent. of all fractures. The earliest writers knew of and described them. Our views are constantly changing, due to thorough research and clinical experience. The roentgenogram has been a great aid, especially the stereoscopic plates, for they would frequently show a fracture not shown by a single plate. Fractures by direct force are common, but those by indirect force, or contracoup, are very rare and practically never exist except when the skull is caught between two fixed points. Fractures at the base are caused by either an extension of the fracture at the vault or from direct imbedding force applied

through the articulation of the atlas and condyles. These fractures occupy about the same position and extent regardless of the injury on the vault, the thinness of the skull through the middle fossa accounting for the frequent fractures at this point. The signs usually present in other fractures are not found in those of the skull; crepitus and increased mobility are not recognized, even depressions are often hard to find, owing to effusion of blood in the soft parts. The history of the accident is often more reliable than the objective symptoms. Guard against errors arising from mistaking old injuries, syphilitic bone destruction, etc., for depressed fractures. An illustrative case brings out this feature: A young woman was brought to the hospital with the history of being hit with an interurban car; she had a depression at the right parietal eminence, could be aroused only by shaking her, a slow pulse, and symmetrical pupils. Feeling reasonably sure she had a depressed fracture, was about to operate, when her mother called the hospital to inquire the extent of her injuries, and she informed us that the girl had suffered the loss of bone at this point several years previous, by being kicked by a mule, and also that she was deaf and dumb.

Diagnosis is easy if there is extensive laceration of soft parts with exposure of bone, and displacement of the fragments, although the suture lines have been mistaken for a fracture. Whether to convert a simple into a compound fracture will depend on the presence or absence of cerebral symptoms. The cerebral symptoms usually obtained are unconsciousness, slow hard pulse, choked disk and vomiting. These signs are more or less marked and are apparent where there is hemorrhage or pressure from depression. The focal signs depend entirely on the area of the brain involved, either from laceration or blood clot, and when involving the "silent areas" are absent. Consciousness after an injury followed by unconsciousness later suggests hemorrhage. It is sometimes difficult to tell the difference between concussion and compression of the brain and fracture or hemorrhage. There is usual unconsciousness in both. In concussion it occurs at once. In compression it may come on after a slight interval. In concussion the pulse may be slow or rapid, usually rapid and always feeble. In compression, slow and hard. In concussion the face is pale, while in compression it is usually flushed and sometimes dusky. In concussion the respirations are usually normal, perhaps rapid, but regular. In compression the vagus center is decidedly affected and the respirations irregular—Cheyne-Stokes type. In concussion the pupils may be unevenly dilated, but generally respond to light. In compression they are fixed, usually dilated, and do not respond to light. The pulse condition is one of the surest signs, as in compression it is invariably diminished in frequency, being sometimes as low as 40 to the minute. This is one of the most constant symptoms, and seems to bear no relation to the part of the brain affected by compression. Fractures of the base may be frequently overlooked unless a Roentgen-ray picture is obtained. I have always considered that continuous bleeding from the ear, even if cerebrospinal fluid was not recognized, was pathognomonic of fracture of the base. Hemorrhage from the nose and mouth following injuries may or may not indicate fracture. Hemorrhage from the orbit is rare but

if it occurs usually denotes a fracture. Paralysis of individual nerves at the base of the skull may occur, but owing to the usual condition of the patient it is difficult to recognize them. A late symptom is ecchymosis, due to the blood from the broken bones becoming diffused through the soft parts at various places, depending on the site of fracture. These may appear at the external angular process over the mastoid or at the occiput and when present are strong presumptive evidence of fracture of the base, even if not associated with other definite symptoms. In doubtful cases, the finding of blood in the spinal fluid would point positively to fracture; however, the risks attended in this procedure do not justify its routine use. The treatment for all fractures of the vault is immediate operation, while for those of the base the direct opposite is true. Paper discussed by Drs. Pierce, Gillum, Jett, C. N. Combs, Jarkins, Kutch and Wyeth.

Nineteen were present.

Adjourned.

Meeting of May 2

Meeting called to order by the president, Dr. Charles Wyeth. Minutes of the previous meeting read and approved.

It was moved and seconded that the Vigo Medical Society indorse the local movement of the school-teachers, in their campaign against the house fly.

PROGRAM

Paper by Dr. T. N. Moorhead; report of a case of actinomycosis.

This is the second case of this disease occurring in my practice, the other one I reported before this society in 1898. The present case is in a man 52 years of age. He presented himself to me about January 1 of this year with an indurated, painful swelling at the angle of the inferior maxilla. As one of the younger members of his family was suffering with the mumps, a tentative diagnosis of this disease was made at this time, but as time went on and the tumor continued to enlarge, involving more tissue, and as antiphlogistic measures failed to relieve or influence in any manner the course of the disease, aspiration was tried, without any results, and finally the tumor was cut down upon and deep in the mass a cyst was found, which upon opening emitted some sulphur-like flakes and gave the first positive evidence of actinomycosis. These flakes under the microscope showed the ray-fungus in abundance. The case has gradually progressed until at the present he has metastatic involvement of the lung with abscess, and foetid bronchitis, an abscess on the hip over the trochanter, and also some kidney complications.

The infection is chronic and caused by the ray-fungus, and in the lower animals is known as "lumpy-jaw." The fungus is found in the fluid from the cysts. A Roentgen-ray examination of this case showed the avenue of infection was through a decayed molar tooth. The patient's diet had been very largely breakfast foods.

The diagnosis is very hard in the beginning for it resembles tuberculosis, sarcoma, Ludwig's angina, septic infection of the gland and carcinoma. The finding of the ray fungus is the only positive sign.

The symptoms are a slow-growing indurated tumor at the angle of the jaw, followed by discharging sinuses, and metastatic involvement of other structures.

The treatment is surgical and the internal use of potassium iodid, and hexamethylenamin.

Paper discussed by Drs. M. R. Combs, Spigler, McBride, Kutch, Larkins, Bethea and Ulmer.

Twenty-five doctors present.

Adjourned.

Meeting of May 9

PROGRAM

Paper by Dr. H. W. Bopp; Paroxysmal Tachycardia.

In this disease the pulse may run as high as 200 per minute, with greatly lowered blood pressure, and the attacks are of sudden appearance and disappearance. They may last for hours or months, ending in recovery or death. The attacks are brought on by over-exertion, gastro-intestinal disturbance, psychic excitement, fear, fright, etc. The prodromal symptoms are vertigo, thoracic constriction and epi-gastric pain. The pulse may become irregular at the last of the attack or before death. Respiration is normal. The face is pale. No pulmonary rales unless cardiac insufficiency and dilatation developes, when there is dyspnea, cyanosis and edema. There is no pain, but is a constriction of the thorax. Diuresis is reduced and signs of renal stasis occur if attack lasts long. Severe sweating is often seen.

Etiology: It is most likely a functional neurosis of the cardiac motor center in the medulla. In most cases there is some myocarditis and some valvular defects, mostly mitral stenosis.

Diagnosis: Made by the history of the case, high pulse rate which is regular and dicrotic, low blood pressure, sudden onset and cessation.

Treatment: Cathartics, nerve sedatives, digitalis in large doses hypodermically up to 1½ grains, heavy concussion of the chest or body, and severe electric shocks.

Case Report: Male, aged 48, weight 195. Personal history negative except rheumatism between 15 and 21 several severe attacks. Sick headache about once a year. Used no coffee, tobacco or alcohol. Has worked since age of 14. First attack came on in 1900 after heavy lifting and lasted 5 minutes, followed by a like attack every month or two, sometimes coming on while asleep, feeling as if a big knot in the stomach, which moved up to heart and back again, suddenly disappearing. The attacks increased from one in three months up to two or three a month. Eight years later (1908) an attack came on that was so severe, that in order to get relief, he walked eight miles to the office. Upon arrival he was exhausted but not dyspneic or cyanotic. Pulse rate 192. Blood pressure 90. Pulse regular and sounds were alike in duration and strength. Attack lasted eight hours and left suddenly, leaving him tired and sluggish but not sick, except slight albuminuria and mitral stenosis. went to work next day and was free of attacks for four years (1912) when one lasted seventy-two hours. He had dyspnea and apnea this time. This attack lasted in spite of concussion of chest, cathartics and morphin, finally yielding to large doses of digitalis hypodermically, and only after the heart began to dilate, the jugulars pulsate and the feet to swell. He was cyanotic and dyspneic, pain over heart, radiating to back of neck, nauseated, and cramps in extremities. Pulse was regular until an hour before relieved when it became arrhythmic. He has had no attacks since 1912 although he has worked hard. His heart is normal and no dyspnea. All but two attacks yielded to concussion of the chest. The last to massive doses of digitalis hypodermically. Heavy lifting and indigestion were the only causes to be found.

Discussed by Drs. Kutch, Weir, LaBier, Bethea, Yung, Moorehead and Fink.

Sixteen doctors present.

Adjourned.

Meeting of May 16

PROGRAM

Paper by Dr. C. R. LaBier; Anesthesia in Relation to Shock.

"Safety First" should be the permanent "Watch Word." The ideal anesthetic in most cases is ether. Anesthesia is becoming more and more an exact science instead of a mass of only empirical knowledge gained by practice and at the cost of danger or sometimes of life. The exhaustive studies in our laboratories of research on the physics, physiology, and chemistry of respiration and anesthetics; the pathological changes observed in animals after intentional and accidental deaths, and after similar accidental deaths in human beings, the accumulated statistics all demonstrate the deep interest, the scientific activity and the happy results of this new outburst of work in anesthesia. The results of this search for improvement is the rise of the professional anesthetist, one who is expert and is taking his place along with the other specialists in medicine and surgery. Anesthesia is an art and specially trained men are needed for safety. According to statistics, America has a greater number of deaths under anesthesia than other countries, due to unskilful administration. There are two classes of men who should not be intrusted with anesthetics and those are: First, the over-confident, who is sure he knows it all, he is very apt to permit the patient to lapse into a state of collapse before he realizes it; second, the one who is timid and fearful and who lacks confidence, he will fail when crisis appears. The ideal anesthetist is one who holds sacred the trust placed on him. He should have excellent judgment being sure of himself and the patient at all times. Able to detect and foretell if possible what is to happen before it takes place. Attends strictly to his business and keeps himself constantly informed of the condition of the patient by observation of the respiration, pulse, pupil, color and condition of the skin. The chief danger from shock involving heart troubles is from myocardia rather than valvular disease. These patients being a greater risk are more carefully watched, just enough being given to keep them under. During anesthesia the chief danger is paralysis of the respiratory center, after anesthesia a post-operative pneumonia. No matter how strong or weak a patient there is always a chance for shock. Take no chances with an inexperienced person giving an anesthetic even under your directions. The anesthetist should see and examine the patient at least twenty-four hours before the operation. A blood test, blood pressure and urinalysis should be made. The anesthetist should receive a fee equal to the first assistant, since he is of equal or greater importance. A complete record or chart should be kept in every case, it assists both the surgeon and anesthetist. The medical colleges should give better training in this field, a sufficient time under the chief anesthetist of the hospital, being a part of the regular course.

It is not the amount of ether inhaled but the concentration to the respired air that makes it dangerous. Two or three deep inhalations of a concentrated mix-

ture is not only dangerous to the respiration but also to the heart. In cyanotic cases we have a lack of carbon dioxide which is the normal stimuli to the respiration center. We should be careful of aspirated matter, and in case of vomiting promote the speedy and complete escape of the vomitus by turning the head sidewise in extension. The aspiration of vomitus may cause either pneumonia or even death on the table. Do not hurry a patient when difficulties arise from dyspnea, spasm, cough, holding of the breath, struggling associated with cyanosis. Alcoholics, neurasthenics and persons of feeble vitality are the hardest class to etherize. Go slow with this class of patients. To attain the best results in anesthesia we need:

First, more professional anesthetists.

Second, more competent instruction at our medical schools and hospitals in the theory and practice of anesthetics.

Third, complete records in the form of anesthesia charts in each case.

Fourth, the margin of safety with ether is wide in competent hands.

Fifth, straight ether by the open drop method as a routine method instead of mixtures and sequences, as I consider the latter more hazardous than ether.

Sixth, every case of anesthesia, no matter what method employed, demands most careful watching from first to last.

Paper discussed by Drs. Jett, Ulmer, Kutch, Bethea, and Fink.

Twelve doctors present.

Adjourned.

Meeting of May 23

PROGRAM

Paper by Dr. H. M. Mullikin; Acute gastro-enteric infection in children under two years of age.

This disease stands midway between acute indigestion and true cholera infantum. The causes are of two kinds, predisposing and exciting. The predisposing factors are heat and the causes of acute indigestion. The exciting causes predominate and are due to previous derangement of digestion and the infections, which are food borne infections. The pathological changes in the intestine are of two clinical forms; the simple or mild and the true cholera-infantum. The symptoms in the simple forms begin abruptly with restlessness, pain, skin hot and dry, the temperature ranging from 100 to 106. In the more severe forms, there are convulsions, great thirst, vomiting and diarrhea and offensive stools. Diarrhea is symptom of very great importance for it is nature's attempt to get rid of the exciting causes. The diagnosis is not difficult, and the prognosis is favorable in most cases, especially if seen early. The treatment is divided into the prophylactic and curative. Hygienic surroundings and a sanitary city have much in common as to prophylaxis. The kind of food and the methods of feeding also help keep infants healthy. Maternal nursing being the best of all feeding methods. If the digestion is arrested at first, do not give any food for several hours. Clean out the intestinal canal. The value of intestinal antiseptics are limited. Give alkalis at first to counteract the acid condition in the stomach and intestines. Opium should be given very cautiously. Bulgarian bacillus are useful, especially in the more severe types.

Paper discussed by Drs. H. W. Bopp, LaBier, Forsyth, Larkins, Luckett, and M. R. Combs.

Twenty doctors present.

No more meetings until September.

Adjourned. O. E. FINK, Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since the publication of New and Nonofficial Remedies, 1916, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

MEAD'S DRY MALT SOUP STOCK.—A mixture containing desiccated maltose and desiccated dextrin (about equal parts) 47 per cent., wheat flour 47 per cent., potassium carbonate 1 per cent. and moisture 5 per cent. Mead Johnson and Co., Jersey City, N. J. (*Jour. A. M. A.*, May 20, 1916, p. 1623).

PHENOLPHTHALEIN-MONSANTO.—A non-proprietary preparation of phenolphthalein admitted to New and Nonofficial Remedies (*Jour. A. M. A.*, May 20, 1916, p. 1623).

PROPAGANDA FOR REFORM

CONTROLLED CLINICAL TRIALS.—At the "Cardui" trial which is now in progress, A. S. Loevenhart, professor of Pharmacology and Toxicology at the University of Wisconsin, testified as to the conditions under which the clinical trial of a medicine would give results as certain as those yielded by the usual pharmacologic methods. Professor Loevenhart had testified that he preferred his students to be familiar with drugs the value of which had been clearly worked out by accurate clinical methods and shown to be useful in the treatment of disease. Asked as to the character of the clinical trials required to demonstrate the value of a drug, he held that there was no difference between a careful clinical test and a careful pharmacological test. Loevenhart explained that to determine if Wine of Cardui had the claimed action an experimenter would take a certain number of cases of amenorrhea, perhaps 50, and divide them into two sets; treat 25 with Wine of Cardui and the others without it and then make an estimate of the amount of the material passed at the time of the menstrual period. Such trials carried out in a hospital, where the physician receives his reports from nurses and is not obliged to depend on the statements of the patients, he explained, would be as reliable as a properly conducted pharmacologic experiment (*Jour. A. M. A.*, April 15, 1916, p. 1219).

DIAGNOSIS OF FEMALE DISORDERS.—Manufacturers of "uterine wafers," etc., often advise the use of their preparations without physical examination of the patient when patients are disinclined to submit to such physical examination on the chance that one of the asserted constituents of the proprietary may hit the cause of the trouble. In this connection the testimony of J. Clarence Webster, professor of Obstetrics and Diseases of Women in Rush Medical College, Chicago, in the "Wine of Cardui" case is of interest: He was asked: "Is it necessary to make an examination of the female pelvis in order to determine the condition, the underlying cause of the condition and the treatment which is necessary?" He replied: "It is necessary, because from symptoms one can rarely have any accurate idea of the pathological conditions in the body, in this part of the body. There are many symptoms which are com-

mon to different conditions and consequently it is necessary in analyzing a case to make a careful physical examination." Again, when asked, "Can you determine, or can the conditions of the uterus, or pelvic organs be determined merely by attention to description of symptoms which a patient gives?" he replied, "I cannot" (*Jour. A. M. A.*, April 22, 1916, p. 1337).

PROPER SELF-MEDICATION.—In the course of his testimony in the "Cardui" trial, John Leeming, M.D., Chicago, explained the extent to which self-medication is to be encouraged. Asked if it was very dangerous for a person who thinks he has a cold to take some aspirin without going to a doctor, he replied that, while in exceptional cases it might be exceedingly dangerous, in most cases of simple cold it would not be so in that Nature's recuperative powers would in most cases throw off such a cold. He explained that he always advises his patients how to treat themselves for simple ailments and to come to him when there are danger signs. Asked if it was dangerous for a person with a cough to get any medicine without a diagnosis, Dr. Leeming replied that it would not be dangerous at all if the person understood his case and in consultation with his doctor he has been generally advised. In families where he is the attending physician he often advises not to send for him in case of a slight cold, but to take a little medicine that will help Nature to throw it off (*Jour. A. M. A.*, April 22, 1916, p. 1330).

WHAT IS A "MEDICAL AUTHORITY?"—There has been a tendency to look upon publishers of text books as authorities and not to consider a physician as an authority on a certain subject unless he has written a text book on it. That the publication of a book does not prove its writer to be an authority is the opinion of J. Clarence Webster of Rush Medical College expressed at the Cardui case which is being tried in Chicago. Having referred to Frank Billings as an authority, Webster was asked to define the term "authority." He replied: "As far as a human being can be an authority on anything, I would regard a man who had worked at a particular subject in a scientific manner over a period of time, and who had more experience in that subject than other people, or most other people, as the best human authority that could be found." Asked if a man was more of an authority if he had written a book, Webster replied: "Often less in the eyes of the world" (*Jour. A. M. A.*, April 29, 1916, p. 1410).

VIBURNUM PRUNIFOLIUM INEFFICIENT.—J. Clarence Webster, holding the Chair of Obstetrics and Diseases of Women in Rush Medical College, testified in the "Wine of Cardui" case that he gave up the use of fluidextract of viburnum prunifolium because he believed that the benefit that he obtained from its use in pain in association with menstruation, was due to the alcohol in it. He had never had any reason whatever to believe that viburnum was of any value in warding off a threatened abortion. When in cases of painful menstruation he used the solid extract which contained no alcohol, he could not get the same results that he had obtained before and he gradually gave up the use of the drug altogether. Arthur A. Small, senior physician at St. Joseph's Hospital, Chicago, testified of extensive experience with the use of viburnum prunifolium, while resident physician in the Toronto General Hospital. As a result of his experience there he is of the opinion that viburnum prunifolium is of no value in the treatment of female disease. In these experiments both the fluidextract and the solid extract were used and it

was found that the alcoholic solutions would prevent or lessen pain in some cases. In other words the only action was that of the alcohol. J. B. DeLee, holding the chair of Obstetrics at the Northwestern University School of Medicine, testified that years ago he gave large quantities of *extractum viburnum prunifolium* for the prevention of miscarriage, but found it useless (*Jour. A. M. A.*, April 22, 1916, p. 1338; May 13, 1916, p. 1566; May 20, 1916, p. 1639).

WHEN MEDICINES ARE NOT REQUIRED OR ARE USELESS.—Promoters of proprietary "uterine tonics" would have their preparation administered to girls and to pregnant women whether indicated or not and in conditions where medicines plainly can do no good. The testimony of E. E. Montgomery, Professor of Gynecology at Jefferson Medical College, Philadelphia, in the "Cardui" trial forcibly brings out the objections to the indiscriminate administration of medicines to girls and women and the futility of their use in cases which need surgical attention. Regarding the administration of "tonics" to girls at puberty he said that to advise a girl who is undergoing a physiological process that she must take some medicine which contains alcohol or any habit-forming drug at this period of her life, which is the most impressionable period of her existence, is doing that which is placing her future in peril, and is without any possible benefit. Regarding the administration of a "tonic" such as Wine of Cardui is supposed to be, he testified that it can do nothing but harm; that a woman because she is pregnant, pregnancy being a physiological process, does not need medicine, but needs attention. Regarding the use of medicines in uterine prolapse as a means of strengthening the unstripped muscle and thus to help the muscle to perform its work to hold the womb in place, Dr. Montgomery explained that the unstripped muscle in the women is not likely to be affected by medicine and that the tissue outside the womb is unlikely to be affected by medicine; to give medicine in the case of a woman who has prolapsus is just about as reasonable as to bathe one's suspenders with a solution when the elastic tissue has been destroyed from them (*Jour. A. M. A.*, May 6, 1916, p. 1481).

BOOK REVIEWS

THE CLINICS OF JOHN B. MURPHY, M.D., at Mercy Hospital, Chicago. Volume V, Number 2. April, 1916. Published Bi-Monthly by W. B. Saunders Company, Philadelphia and London.

An unusually large number of cases are presented. Bone surgery again takes up the most space in this volume. From the wealth of material at his disposal Murphy has something new to bring up each time, thus always keeping up the interest of those who are followers of this surgeon and his work.

A MANUAL OF PRACTICAL NURSING. By Helen Lillian Bridge, B.S., R.N., Assistant Superintendent and Instructor of Nurses, Washington University School for Nurses, St. Louis. Cloth, \$1. St. Louis: C. V. Mosby Company, 1916.

This little volume is not intended to serve as a text-book on practical nursing. It is merely what it is said to be, a manual prepared to supplement the text used by the pupils of the training school of Washington University. A manual such as this, if used intelligently, is a very good thing for the student

nurse to have. It ought to be of much help to her. It ought to make her duties easier and enable her to do her work more accurately. Even the general physician can find in this manual some practical "stuff" that would be good for him to know.

A TEXTBOOK OF FRACTURES AND DISLOCATIONS, WITH SPECIAL REFERENCE TO THEIR PATHOLOGY, DIAGNOSIS AND TREATMENT. By Kellogg Speed, S.B., M.D., F.A.C.S., Associate in Surgery, Northwestern University Medical School; Associate Surgeon Mercy Hospital; Attending Surgeon, Cook County and Provident Hospitals, Chicago, Ill. Octavo, 888 pages, with 656 engravings. Cloth, \$6 net. Lea & Febiger, Publishers, Philadelphia and New York, 1916.

A book on this subject by an author of the reputation that Kellogg Speed has gained in this special branch of surgery hardly needs comment. If any one has a right to speak with authority on the subject of fractures and dislocations it is this author.

He states that much of the clinical and all of the statistical material in this work was obtained at the Cook County Hospital of Chicago. Thus has he been able to acquire an unusual experience and to become an acknowledged authority.

Every form of fracture and dislocation is given quite fully. In discussing in this work fractures and dislocations together under their several anatomical divisions the author has adopted a method that will meet with popular favor.

The physician who has to deal with fractures and dislocations in his practice will find this a very valuable book with which to become acquainted.

THE PRINCIPLES AND PRACTICE OF PERIMETRY. By Luther C. Peter, A.M., M.D., F.A.C.S., Associate Professor of Diseases of the Eye, Philadelphia Polyclinic and College for Graduates in Medicine, etc. Octavo, 232 pages, illustrated with 119 engravings and 2 colored plates. Cloth, \$2.50 net. Lea & Febiger, Publishers, Philadelphia, 1916.

This book will be welcomed by a very large number of physicians, and particularly those who are interested in the special study of ophthalmology and ophthalmoneurology, for it is the only single volume in the English language devoted entirely to perimetry. As a general thing the subject is treated in a rather superficial manner in even our more comprehensive text books on ophthalmology, and Dr. Peter's work will fill a want among those physicians who appreciate the value of perimetry, and, as the author says, it ought to stimulate interest in the minute study of the visual field as a refinement in diagnosis. So many interesting and valuable facts are developed by perimetry that it seems impossible for the neurologist, and in particular the ophthalmologist who tries to do careful work, to do without a perimeter, and this work by Dr. Peter will prove of value in aiding the student to gain a comprehensive knowledge of the subject of perimetry and the significance of its findings.

After considering briefly the elementary facts concerning perimetry, the methods of examining, and instruments employed, the author goes on to a discussion of the anatomy, physiology, and general pathology of the visual field. More than half of the book is devoted to special pathology of fields, and fields in functional nervous diseases. A great many interesting charts are used by way of illustration, and the significance of the various fields is fully discussed. The bibliography is especially comprehensive.

GYNECOLOGY. By William P. Graves, M.D., F.A.C.S., Professor of Gynecology at Harvard Medical School. Octavo volume of 770 pages with 424 original illustrations, 66 of them in colors. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, \$7 net; half morocco, \$8.50 net.

This book is rather unusual in several respects. It is divided into three parts. The first part "deals with the physiology of the pelvic organs and with the relationship of gynecology to the general organism." The discussion of these subjects occupies 119 pages.

The second part of 364 pages is devoted to a description of "those diseases which are essentially gynecologic" and is "designed primarily for the undergraduate student who is taking his initial course in gynecology." In this part of the work gynecologic abnormalities and accidents are also treated and in addition 14 pages are given to a discussion of General Symptomatology in Gynecology.

The third part is entitled Operative Gynecology "and is written for the advanced student and practitioner." To this part of the work 225 pages are given. Besides the strictly gynecologic subjects the author also discusses in this section umbilical hernia, prolapse of the rectum, anal fistula, hemorrhoids, nephrectomy, and varicose veins of the leg. No attempt is made to give the surgery of the rectum, except as indicated above nor the surgery of the mammary glands, for which the author is to be commended, as he is for the slight he gives to "gynecologic tinkering." In the concluding section of this, the last, part of the work the author discusses Technic including among other subjects technic of abdominal, pelvic and plastic surgery with after-care; examinations, suture material, and catharis. Just why these subjects are discussed last does not appear quite plain. It certainly belongs to that part of the work designed for beginners rather than for advanced students and practitioners.

The author presents his subjects clearly; the book is well and profusely illustrated, most of the illustrations being done by the author himself; the type is good; the paper glazed and heavy; the index and binding satisfactory. Altogether, the work is creditable and deserving.

PULMONARY TUBERCULOSIS. By Maurice Fishberg, M.D., Clinical Professor of Tuberculosis, University of Bellevue Hospital Medical College; Attending Physician, Montefiore Home and Hospital for Chronic Diseases, New York. Octavo, 639 pages, with 91 engravings and 18 plates. Cloth, \$5 net. Lea & Febiger, Publishers, Philadelphia and New York, 1916.

Pulmonary Tuberculosis is one of the diseases about which the physician can not know too much. How to control this disease is perhaps the greatest social, economic, and medical problem before us now. Physicians, therefore, more than any other class of people, should direct their efforts at learning all about this disease that can be learned, and they should give the laity the benefit of their knowledge and experience in every possible way.

Looked at from such a point of view a book such as this serves an exceptionally useful purpose. It not only supplies the general physician with such information on the etiology, diagnosis, prognosis and treatment of pulmonary tuberculosis as he needs, but it brings up before him the broader aspects of this great question. It makes him realize that his duty to humanity is more than that of healer.

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There are many splendid ideas and suggestions bearing on every phase of this disease that one can get by going through the pages of a book written by one so thoroughly experienced in dealing with pulmonary tuberculosis as this author. The physician who will avail himself of the opportunity to get the benefit of such an experience will surely profit by it beyond measure.

The book is splendidly gotten up, and the illustrations are all of unusual merit. A few errors, evidently due to poor proof reading, occur and must be mentioned. On page 277 "inspiration" is used where expiration is meant; on page 493 "carefare" for care fare; and 494 "climactic" for climatic.

TOMORROW'S TOPICS SERIES—"A SURGEON'S PHILOSOPHY," "DOCTORS VERSUS FOLKS," AND "MICROBES AND MEN." Three volumes by Robert T. Morris, M.D., each volume nearly 500 pages, in cloth binding, \$2 per volume. Doubleday, Page & Company, Garden City, New York, 1915.

These three books are written by Doctor Robert T. Morris, the well-known and brilliant New York surgeon. The author follows his usual habit of saying things in an original and entertaining way, but above all else, he carries messages to his readers that are worth pondering over, and he is the exponent of a philosophy that is both sound and practical.

In "Microbes and Men" he carries the microbe beyond all questions of illness and into fields of literature, art, genius, marital relations, and, in fact, into all human affairs. He points out that the microbe causes practically all of the unhappiness in this world, and the early philosophers are found, on reading their histories, to have been ill men, every one of them. It is assumed, therefore, that a man is only what his microbe makes him, and that some day it will be possible to vaccinate against the bacilli that are responsible for our mental as well as physical ills.

In "Doctors Versus Folks" the author discusses with unusual forcefulness some of the practical problems that are confronting the medical profession and public. He criticises the doctor who fails to charge respectable fees for services rendered, and the class of physicians and surgeons who, as he says, are men who do not know when to begin nor when to stop with a case. The fee splitters are unmercifully scored, and he says that the so-called "gentlemen's agreement," which some of the fee splitters think does no harm, is the spirit which is at the basis of most of the defects in human intercourse. Exception may be taken to the statement that "the number of quacks in a locality is an index to the character of the regular medical profession in that locality," and yet a satisfactory argument is put forth in the statement that when the regular medical profession satisfies the people, quacks cannot live abundantly in that neighborhood. The essayist thinks that the medical profession is trying to commit suicide by drowning in commercialism, and he attempts to point out some of the errors that we are falling into, and what is necessary to lead us into paths of safety.

In "A Surgeon's Philosophy" the author is at his best, and his analysis of such subjects as feminism, warfare, the double standard, modern dances, sex teaching in the public schools, culture limitations, and many other similar subjects, are not only philosophic, but impregnated with such sound reasoning power and wholesome advice as to entitle them to the consideration of all thinking persons.

EMBRYOLOGY, ANATOMY, AND DISEASES OF THE UMBILICUS TOGETHER WITH DISEASES OF THE URACHUS. By Thomas S. Cullen, Associate Professor of Gynecology in the Johns Hopkins University. Large octavo of 680 pages with 269 original illustrations and 7 plates by Max Brodel and August Horn. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, \$7.50 net; half morocco, \$9 net.

The writer remembers reading a farcical medical college announcement which was published less than twenty-five years ago in which, among other things, it was announced that the celebrated Doctor — had been selected because of his peculiar fitness, as Professor of Diseases of the Umbilicus. This was considered at the time one of the cleverest hits in the whole skit, and now behold: There lies before him a pretentious volume on The Umbilicus and Its Diseases, written by a leading man occupying a chair in a "Class A" Medical School and illustrated by the dean of medical artists. Possibly some jealous general surgeon conceived this book for the purpose of keeping the gynecologists and abdominal surgeons from annexing any new territory.

The first two chapters of the work are devoted respectively to the Embryology and the Anatomy of the umbilical region. The next two chapters are given to the consideration of Umbilical Infections and Umbilical Hemorrhage in the New Born respectively. In the following twenty-three chapters is given a very comprehensive and satisfactory description of the numerous abnormalities arising from arrested development of the omphalomesenteric duct, together with the accidents and deformities caused by these remnants and the diseases developed in them, including granulomata, cysts, neoplasms, hernia, Meckel's diverticulum, syphilis, tuberculosis, and escape of ascitic fluid, pus, amniotic fluid and foetal remnants from the umbilicus. It would seem that the importance of Meckel's diverticulum and the accidents caused by it should have been given more attention than fourteen pages and especially does this seem true in view of the fact that three chapters (49 pages) are given to a consideration of Patent Omphalomesenteric Duct and the accidents arising therefrom. Inasmuch as a patent omphalomesenteric duct is really an exaggerated Meckel's diverticulum there seems to be good reason for treating the condition under this latter heading. Certainly the accidents arising from what are generally accepted as Meckel's diverticulum are much more common than those arising from patent omphalomesenteric ducts, and, to repeat, they are both essentially the same, differing only in degree. The remaining eleven chapters, comprising more than one fourth of the book, are occupied with abnormalities and diseases of the urachus. There follows an Index of names and a satisfactory general index. Relatively little space is given to treatment. A large number of illustrative cases are reported. The book is printed on glazed paper for the reason, no doubt, that this gives itself better to the illustrations, which are numerous and of exceptional quality, and because the illustrations are of especial importance in a work of this kind.

This book was needed and the author has placed the profession under obligation to him by bringing it out. Few save those who read the book will have a full appreciation of the need of it. It should find a place in every medical library.

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Next Annual Session, Fort Wayne, September 27, 28 and 29, 1916

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ORIGINAL ARTICLES

DEVIATIONS OF THE NASAL SEPTUM AND THE SUBMUCOUS OPERATION *

WILLIAM F. CLEVINGER, M.D., F.A.C.S.
INDIANAPOLIS

The nose, besides being a sense organ, has definite functions to perform. Physiologically the nose should warm, cleanse and moisten the inspired air, and in the absence of this normal preliminary preparation abnormal conditions invariably occur sooner or later, to a greater or lesser degree, in the trachea, larynx, bronchi and pleural cavity. That the entire bodily functions may be deranged by absorption of vitiated air or by imperfect oxygenation is well understood and enters in a serious manner into the question of normal respiration. Granting the above assertions, it follows that imperfect nasal breathing, whether due to nasal obstruction proper or to postnasal abnormalities, such as hypertrophied lymphoid tissue in the pharynx or nasopharynx, is of serious import to the person thus afflicted, and should be considered, not alone from the standpoint of respiratory comfort, but from that of mental and physical development as well.

This subject in the present period, since the advent of modern and scientific methods of management of septal deformities and the radical tonsil and adenoid operation, is generally understood to mean more to the young in the stage of development and to the adult who is insufficiently oxygenated or who is absorbing toxins through his cervical lymphatic system, than did the same in former years when surgery of this region was imperfectly understood and performed.

Various factors enter into the causation of nasal obstruction. Heredity plays its part and is important. Under this heading we may consider not alone the formation of the nasal organ at birth, but the hereditary tendency of certain subjects to hypertrophied lymphoid tissue in the throat, which tissue plays so important a part in the development and position of the nasal septum. That the septum is deviated markedly in the development process in many subjects by neglected adenoid and tonsil hypertrophy in early life, is the consensus of opinion, and indeed it is a question if the same does not enter into the causation of septal irregularities far more frequently than does trauma.

Imperfect nasal breathing, due to structural deformity of the upper maxilla in the young, resulting from adenoid and tonsil hypertrophy and neglected after the removal of these growths, is therefore unquestionably a potent factor in the causation of septal irregularities in adult life, as the arch of the superior maxillary bone is changed from the normal in practically every instance where obstruction to nasal breathing has been marked over a period of years. It follows that the majority of post-operative tonsil and adenoid cases should be placed under the care of a competent orthodontist for correction of this maxillary deformity, and if this is not done, indifferent results relative to nasal breathing may, in many instances, be expected.

Few children breathe properly for years, if ever, after the removal of enlarged tonsils and adenoid mass unless the above-mentioned rule is observed, as in these cases the arch of the superior maxilla, in most subjects, will be found not alone higher than normal, but constricted and narrowed in a manner which forces the teeth to protrude beyond the usual line, thus precluding the possibility of the mouth being closed in the ordinary way. This deformity is known to be present in a large percentage of

* Read before the Indiana State Medical Association, at the Indianapolis session, September, 1915.

children in whom the hypertrophied tonsil and adenoid condition exists to any extent, and should receive the postoperative attention the importance of the subject warrants. The same degree of deformity naturally affects the development and position of the nasal septum, and unless remedied in early life by proper mouth braces over a period of years, must, in many subjects, result eventually in the necessity of a radical operation for correction of septal deformity.

Traumatic conditions affecting the contour of the nose and the position of the septum are understood to exist in many cases and must be dealt with according to the indications of each individual problem.

Environment and its influence on the development of the nasal organ is undoubtedly an important problem. It is inevitable that the person who is poorly nourished in the matter of food and air and who in consequence is underdeveloped physically and mentally, will suffer proportionately in his respiratory organs. Development and normal functioning of the glandular system is, as is well known, dependent on cell activity, and especially is this true in the young. Perfect elimination is obviously impossible without proper respiration and normal absorption of oxygen, and the latter function can only be performed in a physiologic way under favorable conditions.

The effect, immediate and remote, of nasal occlusion is interesting and significant. The normal special sense organs of man are necessary for his well being, and none is of greater importance than that of hearing. Unquestionably the vast majority of middle-ear troubles are the direct result of nasal and postnasal inflammations of long standing, and must be considered as secondary manifestations of imperfect ventilation of the delicate ear structures. The nasal turbinates as a rule remain in normal condition so long as the air passages through the nose are unimpeded; in other words, chronic nasal occlusion, barring pathologic conditions resulting from unfavorable atmospheric surroundings, chronic sinus troubles, etc., will, we believe, be found in practically every instance to result from septal deflection or its sequelae.

Normal voice production is known to depend for its resonance on the accessory sinuses of the nose, and this fact is of significance to the public speaker and singer. If the postnares is occluded, wholly or in part, the voice cannot have normal resonance, and impairment of this function will naturally be found to be in direct

proportion to the amount of postnasal occlusion present.

The sinuses are rarely, if ever, chronically diseased unless their natural drainage is obstructed, and this defect will, we believe, be found in almost every instance, barring dental caries which applies to the antrum only, to be due primarily to a septum thickened or displaced.

Vasomotor disturbances do not come within the scope of this paper, but it is well known that the various toxic conditions arising from the intestinal tract or otherwise have a great influence on the nasal and throat membranes, and it is assumed are always taken into account.

That septal deviations resulting in pressure may be of significance to the neurologist is without doubt true, when we consider the intimate relationship of the complex cranial nerve supply to this region. The olfactory nerve will be understood to resemble grossly a bulbous elongation of cerebral matter, and the filaments distributed to the middle turbinate area to be extremely numerous. It is well known that neuroses of serious import may emanate from the ethmoidal labyrinth, and certainly cranial pain of an indefinite character is most common. Pressure in this region must therefore be considered as a possible source of many neurologic problems and may be due to turbinal hypertrophy proper; but it must be remembered that the turbinates having definite functioning properties should be attacked only when other means of reducing pressure have been eliminated. The septum will, as stated elsewhere, in many of these cases be found to vary from the median line, and when straightened will allow the hypertrophied turbinal tissue to assume a normal state. When drainage is impaired the sinuses may of course be diseased, and in this instance the turbinal turgescence may be in part due to infectious matter draining over their surfaces as well as to extension of inflammation involving the whole of the nasal mucous membrane.

Mention has already been made of the ill effects of mouth breathing on the lower air passages, and in considering further the remote toxic effects in general induced by deficient oxygenation or by bacterial absorption we have for investigation a field both interesting and significant.

The internist who has kept pace with modern investigation knows well the morbid conditions which may result from toxic absorption through the lymph channels directly traceable as a portal of entry to the tonsillar ring, so called, which must of necessity be involved at least passively

by inflammatory conditions resulting from contact with the pathologic nasal mucosa. It is obviously impossible for this region to be in normal condition when handicapped by pathological membranes immediately adjacent to these glands.

Reviewing the subject, it is thus shown that normal nasal breathing is in the highest degree important and that physiologically considered nasal breathing is a necessity.

The specific indications for radical surgical procedures on the deflected septum are: nasal occlusion persisting after the necessary measures have been resorted to for the correction of deformities of the arch of the superior maxillary bone after the tonsil and adenoid operation in the young as mentioned before: middle-ear abnormalities, such as progressive eustachian tube inflammation and deafness; pain traceable to pressure in the middle turbinal region; vasomotor coryza; deficient voice resonance, and mouth breathing in general with all its accompanying ill effects such as bronchitis, laryngitis, pharyngitis, etc. These and other pathologic conditions resulting indirectly from deficient oxygenation, such as anemia and reflexly such neurotic ailments as chorea, asthma, etc., should any or all suggest the possibility of improper nasal breathing and will, we believe, be found in a large number of subjects to be the direct result of a septum varying from the median line, which in turn produces by pressure hypertrophy of the adjacent turbinal membranes.

The question of age relative to septal operations is significant. No one versed in this subject will advocate in the child or in the aged person the extensive destruction of cartilage and bone necessary in the submucous operation on the septum. There are modifications of the radical operation which may be applicable to some cases in the young, but in no instance, in my judgment, is one justified in performing a complete submucous operation on the child septum under the age of puberty, for the very good reason that the osseous system in the young is imperfectly developed and the nasal organ itself has not attained its full growth. The young child is therefore especially endangered in the matter of deformity and the submucous operation understood to be distinctly contraindicated.

Granting, then, that it is a grave error to operate on the young, it follows—according to competent observers—that the age of 15 is perhaps the earliest period when one should advise a radical septal operation. Prior to this period the child, *after the tonsil and adenoid operation*,

assuming the septal deformity to be due to a high arch and not to trauma, should be, as stated before, placed in the hands of a competent orthodontist, and in most cases if the throat and postnasal spaces are clear the septal deviation will be favorably affected by subjecting the arch to braces over a period of months, thereby bringing the mouth measurements to a normal standard. It is apparent that the nasal process of the superior maxillary bone, the hard palate and the position of the septum itself must be materially influenced, if not wholly corrected, by this widening process.

The radical septal operation is contraindicated in the old or infirm, as are other surgical procedures, especially where bony structures are involved, and the reasons are obvious.

Sphilis in any stage must be regarded as a serious factor in bone surgery, and especially where the likelihood of deformity is great, as in the delicate structure of the nose. Few operators will care to assume the responsibility of such a procedure in the luetic, and this precaution applies likewise to the person with low vitality, high arterial tension and to the hemophilic.

All acute or subacute inflammatory middle-ear affections contraindicate nasal surgery, and all tonsillar diseases militate against safety. Therefore, as a preliminary precaution against infection, the faucial or pharyngeal tonsils when diseased should be removed before nasal surgery is attempted. This is necessary when considered from the standpoint of acute infection of the tonsillar glands and secondary involvement of the operated area and middle ear is remembered as likely. The tonsils when diseased are especially liable to acute infections and inflammation following any operative procedure in the nose or mouth, as, for instance, in the cleft palate operation, and it is therefore distinctly advisable to first eliminate the possibility of acute tonsillitis or nasopharyngitis as a possible postoperative complication in any important surgery of this region.

Like all comparatively new surgical procedures, the submucous septal operation has been attempted in too many instances by surgeons with limited training, and as a result of this enthusiasm indifferent results are often encountered. It is unquestionably true, and voices the sentiments of men and women who have been earnestly engaged in an endeavor to master the intricacies of modern laryngology and rhinology, that more real harm has been done by the novice since the advent of tonsillectomy superseding tonsillotomy, and the submucous operation

superseding the ancient methods used for the correction of septal deflections and ridges, and the present-day methods of dealing with sinus infections, than any other line of surgery. Unfortunately, rhinology and laryngology has not, in America, occupied in general the dignified position in the surgical field that the importance of the subject has warranted, and this fact is due without doubt to the inadequately trained surgeons who have indifferently regarded progress in this important branch.

The question of anesthesia is a most important one. It is impossible to perform satisfactory surgery unless the field for operation is completely under control. In the submucous operation it is desirable in every instance to perform the surgery under local anesthesia, although it is not by any means impossible to operate under a general anesthetic. The operation is necessarily tedious and requires considerable time in the difficult case, hence it is best to rely on local anesthesia when possible to do so. The different methods used by various operators in production of anesthesia are of interest. Each operator will find his own method preferable for the reason that to him it will be most familiar.

Cocain or some of the cocain derivatives are used by all, and it is only a matter of difference of opinion regarding its application. The English surgeons use a solution of alypin and adrenalin in proportion of 1 to 5 in a 10 per cent. solution, and pack the nose on each side with pledgets of cotton or wool from which all excess solution has been removed. Others use injections of this drug or novocain. Some of our New York operators of note use in a similar manner a 4 per cent. solution of cocain, while others use the pure crystals moistened in adrenalin solution. Among the latter is Freer of Chicago, who is certainly one of our foremost American surgeons in this work.

It is therefore apparent that if a full understanding of the dangers of cocain are understood and remembered, the manner of its application is a matter of individual preference. In our own work novocain or alypin combined with adrenalin is used in preference to cocain, as there is no question but that the toxic effects of these drugs are far less than that of cocain. The nose is packed fifteen or twenty minutes before beginning the operation and complete anesthesia is usually obtained in this time. The field for operation is rendered practically bloodless by the addition of adrenalin in proportion of 1 to 5.

The elevation of the membrane with the perichondrium and periosteum is no small matter, especially if scar tissue is present. The point of greatest danger, it will be agreed, is the junction of the triangular cartilage and vomer. In this region we find agglutination of the perichondrium and periosteum, making this the most difficult portion of the membrane to elevate.

The intricate technic of nasal surgery can only be appreciated by the close student of this work, and we assume does not especially interest the general surgeon or internist, hence will purposely omit many points familiar to my colleagues and mention only briefly a few of the dangers accompanying this procedure.

First and foremost, the dangers are practically nil if one will observe the precautions already mentioned relative to the physical condition of the subject to be operated, and especially if the surgeon has a clear understanding of the delicate problems which may be and usually are encountered. Occupation must be considered in every individual requiring operation, and the professional athlete is especially a poor subject for extensive nasal surgery. The boxer, wrestler, or person engaged in any form of athletics where the hazard relative to injury is great, must be considered a poor surgical risk, as is the person who is subjected to irritating vapors, such as coal miners, firemen, engineers and others who are exposed to sulphur and other forms of gases, unless in the latter class of subjects a sufficient length of time is taken in the postoperative period to secure firm union of the membranes and all danger of infection is thus removed.

On the whole, if one will observe certain definite principles regarding the cartilaginous support of the nose, which in no case should be less than one fourth or an inch, and if complete protection is afforded the cribriform plate of the ethmoid, thus eliminating the possibility of traumatic meningeal involvement, no ill effects other than a middle-ear inflammation or temporary discomfort from hematoma can result. The former possibility is reduced to a minimum by strict surgical cleanliness and hospital attention, which in every case should be insisted on, and other precautions already outlined.

No surgical procedure of modern invention is capable of more definite results than the one under consideration, when skilfully executed, and perhaps none is capable of more disastrous consequences when in the hands of the surgically inexperienced.

DISCUSSION

DR. CHARLES R. JACKSON, Indianapolis: I want to acknowledge my inability to discuss this paper in its entirety. I only wish to touch one one or two points of interest to the orthodontist. Orthodontia is a study of the development of the face or the facial bones, and not, as many have supposed, simply dealing with the teeth. The teeth are simply means of developing the bones of the face. There should be a close relationship existing between the rhinologist and the orthodontist. In the first place, if the rhinologist could establish and maintain perfectly normal breathing in children between the ages of 3 and 12, I believe that about 40 per cent. of all cases which are presented to the orthodontist would be eliminated. But that is impossible, and we are brought to the real reason for a close relationship, and that is, as Dr. Clevenger said in his paper, the fact that so many of these cases after you have established perfectly free channels for normal breathing do not resume normal functioning of the nose. That is where the work of the orthodontist comes in. The question is: If you establish the ability for normal breathing, why does not the child breathe through the nose? The reason is often advanced that it is a matter of habit. In some cases we are aware that that is so. But we will have to admit that in many other cases it is not habit, but due to a physical impossibility in that child to close the lips, and if you cannot close the lips without a conscious effort you are not going to have normal nasal breathing. You will say, when you establish normal breathing conditions, why do not you have normal development of these parts, and that brings up a point I want to make. In reading papers written by physicians, especially rhinologists, they have never taken into consideration this one point, which was mentioned by Dr. Clevenger, that we have arrested development of the maxilla, but he said nothing about arrested development of the mandible. In the majority of these cases we have arrested development of the mandible, so that we have retruding chins. In normal relationship of the upper and lower jaws the teeth interdigitate like a set of wheels, and when they come together those inclined planes fit into each other, two teeth being supported by two opposing teeth. Consequently there is no reason for those teeth to get out of the same position unless acted on by some perverted function. And that is the condition in mouth breathing. It perverts function, allows of arrest of development of the mandible, and, instead of growing to its normal length, we have a shortening of it if this condition goes on after the age of six. What happens when the child closes the jaw? Instead of biting as it should normally, those teeth have shoved over and the mandible bites distally the width of one tooth. There is no more reason for that to correct itself, when in this position (indicating), than

to shift from the normal position. And that is the reason why we must have some external force to change the relation of the jaws if we are going to correct this deformity of the mouth, which causes the child to breathe through the mouth, owing to the constricted arch; but more particularly retrusion of the lower jaw.

In regard to the deflected septum, I do not know whether I understood Dr. Clevenger correctly—possibly I did not—when he said that this arch changes during mouth breathing. I do not believe it is so much the change, but the lack of change or deficient development laterally and deficient extension of the floor of the nose downward, whereby we do not get the space necessary for the septum to occupy its normal height, and it must be curved. Perverted function of the nose not only causes deformity of the face and septum, but we do not have that normal pressure downward which produces the change in the floor of the nose and palate. Instead of having a change, we have a lack of change, or arrested development.

Another point that I feel has a bearing on this condition of the floor of the nose in a normal breather: If you have ever stopped to think that when you close the mouth and swallow, the tongue is drawn up into the roof of the mouth, you will realize that we thus establish a partial vacuum. Now, then, as soon as we have done that, the jaw is held in that position by atmospheric pressure and not by any tension of the muscles, and will stay in that position until we swallow again.

There are so many things connected with orthodontia that really should be of interest to the rhinologist that it is pretty hard to tell just where to stop. Just one more point: We are in the habit of looking at individuals we meet and trying to determine the character of that individual by his or her face—facial contour, appearance, looks. Here we have thousands of individuals, from childhood, who have no chance in the world to show their own personality and thoughts by the expression of their faces. It is hardly fair to these children. Every one who meets them thinks them weak, because of their retruding chins, which condition exists through no fault of their own. The rhinologist who is conscientious should help to produce a wonderful work by correcting these defects early in life.

DR. F. OVERMAN, Indianapolis: No operation has been accepted with more favor than the submucous resection operation. Like all other operations of that character, I feel that the pendulum has swung to the extreme. I am inclined to think that often septal operations are performed where perhaps the removal of a tip of a turbinate or a spur would give the same result.

The question of age, of course, is an important one. Dr. Clevenger and I have never just agreed on that. I think there are cases in which, before the age of 15, a submucous is necessary.

Dr. Page will recall the case of a 4-year-old boy with hay-fever, and asthma; patient anemic, with a Figure S deformity of the nasal septum, on whom a submucous resection was done six or seven years ago. The boy was relieved of his hay-fever. That case was a success. That rule will not hold for that age, either. An experience a year ago taught me a valuable point. A submucous resection on a patient giving a specific history of syphilitic infection did not heal promptly. Finally, a sloughing of the mucous membrane on one side took place, then healing—but a crusting. Six months later the patient was seen by Dr. Neu. Syphilis was demonstrated, and I think the patient is now confined in the Central Insane Hospital, hopelessly insane.

A rule is being made in many clinics that before a submucous resection is done a Wassermann is required to be on the safe side.

Another point recently brought out is of interest to the operator, namely, if a patient is the least inclined to be atrophic, a submucous resection is contraindicated.

DR. WILLIAM S. TOMLIN, Indianapolis: I wish to call your attention to one particular thing that I have noticed in the discussion of this subject at different times, namely: It seems to be generally understood, in speaking of submucous resection, that when you make an opening into the tissue through the perichondrium, you must work as long as you can see anything in sight to pull out. A submucous resection is just as applicable to raise the mucous membrane and take off the ridge of the vomer. And where only the ridge is needed to be removed, it may be harmful to continue to take out the quadrilateral cartilage and perpendicular plate of the ethmoid, simply because you have an opening. That is true especially in younger patients.

I am in the habit of operating on patients younger than those recommended by the essayist and others. I think, as in the case mentioned by Dr. Overman, even in young children, 6 7 and 8 years of age, if their general development has been materially retarded, and if they are being deteriorated in health and held back in school work, a submucous resection may be made to the extent of removing sufficient of the deformity to give room for breathing. I think that we are doing ourselves justice and justice to our patients in doing it.

I wish to take issue with the essayist on one point, namely, about the harm that is being done by these more modern operations. I have not seen it. I think that the lack of technic attaching to ear, nose and throat practice has been due to the fact that we have had so much treatment and so little result. Our field should be recognized as one requiring real work.

DR. L. D. BROSE, Evansville: I do not think many of us have appreciated the power that the atmosphere has in downward pressure. In the treatment of these cases that is one of the

things that we must take into consideration. The thing that I have noticed in these cases, both those that I have observed and those treated by others, is that the obstruction has been removed, but when you get back along the septum you will find often a bony spur left there, and this will often project into the turbinal and still remain a place of irritation and do a lot of harm.

DR. LAFAYETTE PAGE, Indianapolis: A submucous operation, like all surgical operations, is not attended always with the ideal results hoped for. I think the good of it is very generally appreciated now. Oculists are not always aware, I think, of the effects of a deflected septum on the general structures of the eye. We have in a great many cases, especially neurasthenics, where a septum is badly deflected, seen glasses fitted without any attention whatever to the nose. I think that is overlooked too frequently by the oculists, and I would like to hear from them on this subject.

I think a great many cases of asthma are due to pressure from the deflected septum, and bad drainage of the ethmoid cells, to which the essayist has called attention.

Dr. Overman's point, as also made by the essayist, as to the age is interesting. Somebody has said somewhere that the submucous operation should not be done until puberty, or until the nasal structures have fully developed. We have cases in which children have injured septums interfering with nasal breathing. It is not infrequently that children, 8 or 9 years old, have this condition, with all the discomforts attendant thereon, and I cannot see any reason why these conditions should not be relieved. In a number of cases I have done it in children under 12 years for obstructions that could not be relieved otherwise and for complete fractures of the septum that could not be relieved by any correction of the arch.

I am very glad that Dr. Jackson is here to emphasize the importance of correction of the arch. We know what a great advantage it is in all these cases, even in cases of bad deflection. It does a great deal of good, but it does not always correct the nasal condition to spread the arch. There is no reason why it should not be done early to save the effects on the eyes, ears and nasal structures, as well as occlusion. In my experience there is no occasion for a fixing a fast limit as to the time of doing it. I believe the results from doing it early are not as bad as the results of the deflected septum and defective nasal breathing.

DR. C. H. McCASKEY, Indianapolis: The septum operation is no doubt by far the choice of operation for most deformities or intranasal obstruction. The dangers, of course, are always to be taken into consideration.

Dr. Overman mentioned that in atrophic rhinitis this fact should be duly considered.

There are certain cases of atrophic rhinitis that I think are markedly benefited by that operation. There are other forms of atrophic rhinitis where this operation would not do any good. The thing that we most abhor is a perforation; but I think that perforation in septal operations is wholly a matter of careful after-treatment. In other words, keep away from infection.

DR. C. F. NEU, Indianapolis: I only want to emphasize one point, which has been alluded to, and that is one of the results that so frequently follows nasopharyngeal obstruction. A great many of our children in the schools are looked on as dullards and laggards because of mental dulness and backwardness, which affects their after life. Many of them are looked on in later life as immoral and criminal in tendency, due entirely to this impairment of development. If I had any criticism to make of the paper and discussion, it is that there is not sufficient emphasis placed on the importance of attending to this condition early in life. Dr. Jackson referred to three years of life. I should say earlier than that. The habit of mouth breathing is established before that. I would say to those who have the care of children to pay more attention to this earlier in life.

DR. JOHN F. BARNHILL, Indianapolis: This question of age is one that is important. I take it that the essayist means that if there are tonsils and adenoids present, with a deflected septum, that the septum should be let alone, the adenoids and tonsils removed and the orthodontist, if there is a deformity of the upper or lower jaw, should correct it and give the child a chance. I think, if that is his attitude, that it is perfectly correct and right, for the reason that it will succeed in a large number of cases. I agree, however, with Dr. Page in this, that there are cases with no deformity of the jaw, and with no other deformity that we can see, except the deflection of the septum—which does not cause a great deal of trouble. If such a case is present, it ought to be corrected, whatever the age.

Dr. Jackson emphasized many points, but the point as to why mouth breathing gives rise to deformity of the jaws has not, in my judgment, been thoroughly understood by everybody. The thing begins in the earliest life. A large percentage of these cases, as Dr. Clevenger said, begin even at birth. They are congenital.

I believe that the greatest and most important factor in the cause is the tongue. How does the tongue do it? Dr. Jackson correctly explained it. If the child does not breathe properly through the nose, the tongue does not properly approximate to the roof of the mouth. If you will shut your mouth this way (illustrating); you will find that your tongue fits in the roof closely. If the mouth is open, that is absolutely absent. If the face develops wrongly, the roof develops wrongly. The faulty development of the roof of the mouth, due to adenoids and ton-

sils, causes faulty development, and in my judgment is the cause of these troubles.

DR. CLEVINGER (closing the discussion): Regarding the age limit, I said specifically in my paper that the object of not operating on these children was simply to give the orthodontist an opportunity to straighten the arch of the superior maxillary bone, with the hope that by so doing the septum would be corrected in the majority of instances.

So far as operating on children is concerned, I do not do it for this reason: I have in mind three children living in Indianapolis now with saddle-back noses, from too early operation. Nothing has been said about saddle-back deformity. Anybody who sees a saddle-back nose following a submucous septal operation will not wish to do another, under similar conditions. I have never had one, but I have seen them.

I believe that the majority of deflected septa are due to the conditions I have mentioned. Of course, in traumatic conditions we have a different situation, but in such cases your patient is not going to be harmed as much by giving him a little time as by making him a deformed subject all his life.

DISEASES OF THE GALLBLADDER AND THEIR INFLUENCE ON ADJACENT ORGANS*

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This short paper originally was intended to be read before a meeting of general practitioners, but since it includes some phases that are surgical, I take the liberty of presenting it here. In so doing I wish to emphasize the principal points in diseases of the gall-bladder, the intimate relation which exists between this organ and the other organs included in the portal circulation, the liability to the development of complications and the danger in delay in the administration of treatment. Time will not permit details of the subject in its entirety, but only a mere synopsis of what might be said, and this only to the point of promoting discussion and study that will lead to that which is helpful. The etiologic influence of diseases of the gall-bladder on certain digestive disorders commonly referred to as dyspepsia, flatulency, intestinal indigestion, jaundice, etc., their stubborn resistance to the usual medical attempts at relief and the prompt and decisive response, in the average case, to surgical interference, makes it a

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subject of special interest and well worthy of our most careful and painstaking study.

A mere reference is all that is necessary to call to our minds that the anatomic relations of the gallbladder are so intimately associated with the pancreatic and hepatic ducts, duodenum, liver, pylorus, kidney, etc., that one could hardly become diseased without endangering its neighbor. The cystic duct which is from 1 inch to 1½ inches in length joins with the hepatic duct a short distance below its exit from the liver and forms the common duct which is about the size of an ordinary goose quill and 3 inches in length. The common duct passes toward the duodenum and in two thirds of the cases passes through the head of the pancreas. In the other third its direction is behind the pancreas. Ordinarily about one third of the way up the duct from the duodenum it is joined by the duct of Wirsung, which is the superior duct of the pancreas. Not as one, but side by side, these two ducts enter the wall of the duodenum diagonally ending in a papilla-like elevation of the mucous membrane within which they unite to form a short common cavity known as the diverticulum of Vater. At the base of this cavity is found the two openings. The duct of Santorini, the interior duct of the pancreas is usually joined to its superior by a small twig within the pancreas, but completes its journey to the duodenum alone and terminates in an opening a short distance away from the diverticulum of Vater and nearer to the pylorus. With the gallbladder as a safety reservoir into which the bile regurgitates when pressure is too great in the common duct and with its great ability as a secreter of mucin and with a patent and disease-free condition of the hepatic and pancreatic ducts, a very large percentage of individuals will be free from any digestive disturbances. True it is that in a certain percentage of cases the primary lesions will be gastric or intestinal, but the number of such, in which there is no disturbance of the area described, is very small.

Until recently but little was known, of a positive nature, concerning the functions of the bile and pancreatic juices, but sufficient experiments have been made to well demonstrate the necessity and the part taken by each of the juices in a perfect intestinal digestion, alteration or absence of either is always followed by well-marked symptoms. Twenty to 30 ounces of bile are secreted in twenty-four hours, and in a perfectly normal state is nonpoisonous to the gastric mucosa or the peritoneum. The coloring matter and acids contained are poisonous when liberated by abnormal chemical changes produced by disease of the gallbladder or ducts and

exhibit themselves in the symptoms of a severe toxemia. A small amount of this is thrown out of the system by the kidneys and the balance neutralized by the intestines, liver, etc. Pancreatic juice is not so abundant in quantity and in its normal state is nonpoisonous. Its power to digest is almost nil unless there is added thereto bile and intestinal juices. Infection of the gall and pancreatic tracts is almost always due to the typhoid or colon bacilli, the latter of which is very modest in the absence of inflammation, but in its presence is very virulent. Infection almost invariably takes place by continuity of tissue, following up the ducts from the duodenum, but may be produced by infection from the blood current. A catarrhal duodenitis is easily followed by extension of the swelling of the mucosa into the ducts of the pancreas, common and cystic ducts, gallbladder and may be into the hepatic ducts and the liver. If the case be one of the majority in which the common duct passes through the head of the pancreas then a jaundice, more or less intense, with digestive disturbances will be present. Slight toxemia is to be found in the acute case, but if to the swollen mucosa is added an infection then pain and tenderness over the gallbladder with fever and rigor and increase in the digestive disturbances will add markedly to the symptoms noted and the toxemia will be much increased. From this the kidney may be disturbed to the point of a pathologic result, but most common in occurrence and most commonly overlooked perhaps is a myocarditis. Of the three groups of heart disease, namely, diseases of the valves, diseases of the coronary arteries and myocarditis, the latter is of growing interest to both physician and surgeon. If following or with an acute or chronic catarrhal or infected cholangitis you have nausea, regurgitation or vomiting with burning of the gastric mucosa, tenderness over the gallbladder, loss of weight, skin cold and moist, some albumin and casts in the urine, low blood pressure, billious attacks, yellowish complexion and conjunctiva, occasional cough and dyspnea, enlarged liver, varying temperature, increased respiration, pulse 90 to 120, dilated heart and tachycardia in a patient especially in middle life or old age you have a myocarditis due to toxemia of gallbladder and pancreatic origin, and treatment should be directed primarily not to the heart but to the conditions in the hepatic area. I believe the mistake has been quite generally made to not entirely ignore the hepatic symptoms in these cases, but to allow the cardiac symptoms to overshadow them and to treat too lightly the intimate relation which exists between the two

Of all diseased conditions to which the gallbladder is heir and which is followed by complications of greatest intensity and for which the greatest number of patients seek the physician or surgeon for relief cholecystitis with or without gallstones stands at the head. It is said, on the authority of careful investigation, that 10 per cent. of all Americans have gallstones, 25 per cent. of all American women have them and 90 per cent. of those so afflicted have borne children. Infection, the chief etiologic factor, in the formation of these concretions, in most cases, precedes their presence and is due chiefly to the colon or typhoid bacilli. So long as they remain in a quiescent state only the symptoms of infection and its complications are present, but if they attempt to pass down the cystic duct pain sudden in onset and sharp in character is felt in the right upper quadrant of the abdomen centralizing over the ninth intercostal cartilage in front and passing through under the right shoulder or in the region of the tenth dorsal vertebra. The pain may radiate downward over the appendix or be referred to the stomach or region of the spleen. The breathing is difficult due to spasm of the diaphragm. The nerve supply of the gallbladder and ducts is received from the four lower dorsal and the two upper lumbar, nerves which pass forward across the diaphragm and between the hepatic ligaments, and for this reason we have the spasm of the diaphragm, difficult breathing and pain in the back. There is great anxiety, profuse perspiration and sometimes vomiting of bile-stained fluid without relief from the pain. Sudden relief is brought about by escape of the stone backward into the gallbladder or downward into the common duct or into the duodenum, much prostration follows the relief from pain and enlargement and tenderness of the gallbladder exists for several days. Jaundice which is present in about 10 per cent. of the cases, will follow if the attack is followed by obstruction of the common duct or if it should be a case in which the common duct traverses the head of the pancreas and a chronic pancreatitis exists as a result of the infection. Constipation is not always present, but if the attacks are repeated and obstruction of the common duct occurs in its general course or in the ampula, clay-colored stools, highly colored urine and intense itching will be added to the symptoms already described. In the typical case the symptoms enumerated are present and the diagnosis is easily made, but this constitutes only a small percentage of the cases that actually exist, hence we should look well to the atypical signs in order to be able to recognize the conditions that underly some of the compli-

cations with which we will come in contact. In a long series of necropsies recently published 506 cases of gallstones were found which was 6 per cent. of all cases examined. Of this number only 21 cases were diagnosed before death. This would force us to the conclusion that only a small per cent. of the cases present the typical and characteristic symptoms and that the remainder can only be recognized by the atypical or unusual signs. Prominent among these is the tenderness of the gallbladder elicited by deep pressure or the Murphy piano-hammer method, and tenderness of the intercostal nerves on one or both sides. In reference to the later about 60 to 70 per cent. will show tenderness in the intercostal spaces on one or both sides. Abraham's sign, namely, pain on pressure at a point midway between the umbilicus and the cartilage of the ninth rib is found in about one-third of the cases. The intercostal neuralgia with gallstones occurs in the ninth, tenth and eleventh right intercostal spaces, but the most striking sign is a sharp pain felt on pressure of the anterior end of the eleventh rib. These pains and tenderness seem to be characteristic only of cholelithiasis, and they are frequently the first signs of a tendency to gallstones and may prove the forerunners of an acute attack. That an infected appendix may play a part in the atypical cases must not be forgotten and must be searched for by the latest methods. This troublesome organ may be the seat of various pathologic conditions and its location may vary greatly from what is normal. Its pain can be referred to almost any part of the chest or abdomen, and for this reason we should look well to conditions that justify its elimination in our diagnosis of gallbladder disease, not forgetting, however, the intimate relation that exists between the two through the lymphatics and the liability of infection from this source.

To these signs may be added the slight yellow tinge of the external margin of the conjunctiva, coated tongue, flatulency, occasional "bilious" attacks, frontal headache, poor appetite, highly colored urine, dull languid feeling, lack of endurance and all the various symptoms of an intestinal autointoxication. Duodenal or gastric ulcer may be found as a result of the infection of the gall tract associated with or aside from regurgitation of food, hyperacidity, perverted taste etc., which are characteristic of this condition. Duodenitis is present, and adhesions may be such as to lead to symptoms that will strongly suggest the presence of gallstones when these concretions have not yet formed. If pus producing bacteria find their way to the gallbladder that contains colon or typhoid infection and probably stones, the symptoms of a sep-

ticemia will be added to the already existing conditions with probably fatal results. Carcinoma is often a result of cholelithiasis and has its origin in the gallbladder, then in turn involves the ducts, pancreas and pylorus and in addition to the symptoms of a chronic pancreatitis is followed by marked emaciation, the presence of a tumor, constant pain and vomiting of all foods. It has been my privilege to see a few cases of this type in which I had diagnosed gallstones and advised relief by surgery but was refused, and later symptoms of carcinoma developed following the routine mentioned and later the diagnosis was verified by postmortem. As a result of an infective cholangitis with or without gallstones the pancreas suffers damage more often than any other adjacent organ and presents a line of symptoms closely akin to those of the gallbladder and ducts and the pathologic conditions thus wrought have a marked bearing upon the prognosis of the case, the presence of a glycosuria is not always a fatal sign but one indicating an interstitial pancreatitis of extensive type. Several other types of disease of the hepatic area might be mentioned, but I have only taken the liberty to call your attention to the more common ones. The treatment of gallbladder diseases and the various complications must of necessity be divided into medical and surgical, the results of the former being largely palliative, while to the latter we must look for permanent relief. The readiness with which a toxic myocarditis or a chronic pancreatitis or the various symptoms of an infective cholangitis, yields to prolonged drainage of the gallbladder is extremely gratifying to both patient and physician. The dissolving of gallstones by oil, phosphate or succinate of soda or all the other various remedies for which such claims are made, are misleading to both patient and physician for the remedies do not do the work claimed for them and we are led into false security and much valuable time is lost. However, I would not have you believe that all cases of gallbladder disease are surgical, but that they are medical at first and so continue as long as we are getting rapid improvement, free from complication and recurrence of attacks does not occur, but if the latter is true, then we should urge surgical interference without delay for the complications will be almost certain to come. The results of an operative course in these cases is ordinarily very gratifying, the mortality usually being not more than 2 per cent. and in simple cholecystitis is much better still. This is a splendid showing, but if cases could only be induced to resort to operative measures earlier in the onset of their disease much more could

be expected and realized. Concerning gallstones, Deaver says: "Much would be gained if the cases came to the surgeon earlier, when gallstones alone had to be dealt with and not their complications. The complications cause the operative failures and raise the mortality. Sepsis and infection before and at the time of operation have caused nearly half of the deaths in my cases. It is evident, then, that if the cases are sent to the surgeon in due time, and operated on when they are in suitable conditions, few failures will follow proper surgery. Medicine and surgery must go hand in hand, in the treatment of gallstones and infections of the gallbladder, each treating a separate class of cases, and always bearing in mind the fact that a surgical cure is the only final and definite one." The words of Dr. Deaver are but the expression of every surgeon who has had experience in this class of cases and of every physician to whose lot has fallen the responsibility of directing the treatment of individuals whose diseased condition made them members of the class mentioned. Already, in the minds of the laity, surgery has lost much of its "awfulness" and the feeling that it must be the "last resort" in the struggle to regain health, and while practically every case is a medical one when first seen by the physician, the growing leniency on the part of the patient toward the radical eradication of the diseased condition, when stubborn to medical treatment, should be encouraged, sufficiently early to avoid complications that will not only handicap the work of the surgeon but much endanger the ultimate recovery if not the life of the patient.

Thus I have brought to you no "new things" in the treatment of these very common conditions of the gallbladder, but have attempted to suggest the better utilization of those already at hand. When Dr. John S. Bobbs, in 1867, mastered the courage to open the gallbladder of Mrs. Z. Burnsworth he builded well the foundation from which "relief" has lifted its head to bless thousands of human beings. His act was prompted by the necessity of relief for the local condition and not as a safeguard against uncontrollable complications that might result, the growth of which, since that time, has been carefully and accurately demonstrated.

In the treatment of these conditions I refrain from the enumeration of remedies and the various steps in technic, which are quite familiar to all, but take the liberty to introduce a feature in the form of a suture which I use quite frequently and which serves quite well indeed, the use for which it is intended. So far as I know this is new and if so I hope it may be of service

to those who may find occasion to use it. I have chosen to call it the "zig-zag purse string." This can be of whatever suture material the operator may find best to use in each given case. It can be used in gallbladder, intestinal or any work dealing with parts that are thin walled and tubular. It has for its object two things, namely, hemostasis and inversion of the cut edge, thus giving approximation of peritoneal surfaces. In applying this suture the plan is followed, as is shown in the drawing of the gallbladder which we have before us. The needle is thrust in through the entire wall, then carried up at right angles, the distance depending on the amount of tissue desired in the inversion, then out, then laterally one-fourth inch, then in, then down to a point on the same level with the first insertion, then out, then laterally one-fourth inch, then in, then up the same distance as before, then out, then laterally one-fourth inch then in, then down and the same routine repeated. When the opposite side of the tube from the first insertion is reached the lower angle of the suture is caught with a pair of forceps. The suture is continued round to the point of beginning the last insertion being from within and on a line with the first. Traction is now made on the two ends and the forceps, and inversion very quickly and completely takes place. The forceps are now released and the two ends tied. Because of the "brace effect" of the vertical part of the suture the edges always turn inward and never outward. This suture is easily and quickly applied and is applicable to cases with or without drainage.

DISCUSSION

DR. MURRAY N. HADLEY, Indianapolis: In discussing this paper I wish to speak particularly regarding the roots of infection. This was mentioned by Dr. Williams as occurring either as an ascending infection or by way of the blood stream. Several theories concerning the source of gallbladder infections, all of which have aroused a great deal of interest, have been introduced. Dr. Rosenow perhaps will explain the results of his recent investigations on this subject in his address tonight. There are two other theories that I think deserve consideration. The gallbladder becomes infected by the bile, which in turn was infected within the liver. Another theory is that the gallbladder becomes infected by way of the lymph stream, not an unusual way for infection to take place. The point of infection may be at a distance and the bacteria find its way to the lymph stream by the lymph channels within the organ. If the gallbladder becomes infected by way of infected bile, or infected by an ascending infection, we have a mucous membrane which will permit the organ-

isms through it. It is supposed that we have a lesion of some kind, otherwise the organisms would not get into the skin. I see no reason why that theory might not be a very logical one. It would not take much to demand an entrance of an organism, so the objection that it entails a lesion within the mucous membrane by an infected bile or ascending infection is not well taken.

Mention was made by Dr. Williams—I will not mention the infection by way of the bile because I think it is likely that Dr. Rosenow tonight will give an interesting report of what has been done along that line—that the blood is the real way by which the mucous membrane becomes infected. These organisms are not as frequently the etiologic factor in involving the gallbladder as was previously supposed. There is a disposition to attribute it to streptococcus and that the colon bacillus and typhoid bacillus do not figure as largely as was previously thought that they did in gallbladder infections.

There often is an involvement of the pancreas in gallbladder infections. The common duct, in about two thirds of the cases I have observed, went through the head of the pancreas through the wall of the duodenum and developed appendicitis. I think Deaver says the majority of the organisms do not trickle through the common duct but is a lymphangitis, a subsequent involvement of the lymph nodes. Perhaps the most interesting part of gallbladder surgery has to do with the knowledge of the number of cases in which on operating we do not find stones. Without doubt the procedure to follow in each case will depend largely on the experience of the individual operator. He will make up his own mind from what he sees. His knowledge will depend on his own experience. The greatest experience in this type of surgery does not free one from the difficulty in diagnosing trouble in the gallbladder more than heretofore. Many indications have been explained carefully in recent years, but just what is the indication for draining or removal of the gallbladder? The rule has been laid down by one of the Mayos that where a patient gives clinical symptoms of gallbladder trouble, investigate the lymph nodes and head of the pancreas. If these are involved the trouble is local with the gallbladder. This seems to me to be a very sensible and practical rule to follow in the presence of clinical symptoms and yet apparently no stones in the gallbladder.

DR. JOSEPH H. WEINSTEIN, Terre Haute: In discussing papers we are all prone to divert from the actual paper or subject and inject into our discussion some or many of our own pet hobbies, but since the rules of the association limit our time, I will attempt to confine my few remarks to the actual subject-matter.

The essayist has given us an excellent platitudinous paper, but this subject always will evoke discussion. I use the term platitudinous

advisedly, as the essayist admits in his opening statement that he presents no new things, but facts, mostly as we now know them.

Some one, I cannot remember who, has intimated that a good live medical meeting should be like "Donnybrooke Fair." The essayist has not been hydraheaded, but I will attack at least one point, that is, just where and when to draw the line on medical treatment and management of gallbladder disease.

The essayist quotes Deaver, saying, "Medical and surgical treatment go hand in hand"; yet in the same paragraph ends by saying, "we must bear in mind the fact that a surgical cure is the only final and definite one."

I take the radical stand that a gallbladder sufficiently diseased to produce symptoms that can be diagnosed definitely is a surgical case, just as surely as an appendix definitely diagnosed as pathologic is surgical.

None of us will deny that either the gallbladder or an appendix in its primary pathologic stage may not and does not recover, either with or without treatment, and I am forced to say that in all probability more often without treatment than with it. I mean that the chances are that we not infrequently see cases for the first time that have recovered from mild attacks of cholecystitis, weeks or months previously, having received no medical treatment whatever, and many others that have been lightly passed off as gastric indigestion by some busy or unthinking doctor. Or, again, the case may have been unfortunate enough to have fallen into the hands of some one who is still treating "gastralgia."

Are these cases that recover to govern us in our conduct of all our cases, to the detriment of the others? Are we justified, as Dr. W. J. Mayo says, "in attempting to put out a fire by deluging the fire alarm box with water?" No, we are justified in the medical treatment only after thoroughly acquainting our patients with the possibilities and probabilities to follow, and their refusal to take our advice.

We know the mortality is very low in the early uncomplicated cases, that it is only the complicated cases of infection—extended inflammation into the liver ducts or to the pancreas or the pylorus—that give us the death rate that intimidates our patients. In the best clinics one-half of 1 per cent. mortality is the rule in early selected cases. Where the disease, by allowing it to progress, has gone beyond the gallbladder and entered the ducts of the liver, producing a cholangitis or septic condition, the mortality rises as high as 5 per cent., and in the more serious complications much higher still. Therefore, why procrastinate when we are as certain as our diagnostic skill permits us to be that we have a cholecystitis (we cannot be certain in many cases of the presence or absence of stone even with the Roentgen ray) and why delay surgical intervention when at that time we can

cure 995 cases in a thousand, whereas by delay we add not only to the physical suffering and discomfort of our patients but also can promise at best but 950 cures in 1,000?

The essayist portrays a very aggravated case of empyema or infection and prays that we be not clouded in our view of the primary cause of the present myocarditis. This prayer could be offered, I think, in any condition of absorption of septic or pyogenic infective material emanating from any organ or tissue in the body. The myocarditis is as likely to be a complication from the slow absorption of toxins from one place as another, and therefore I think there is nothing at all characteristic or pathognomonic in a myocarditis accompanying or following gallbladder infection.

He has not taken up any operative methods or technics except his "zig-zag purse string;" therefore, not being in the scope of his paper, I will refrain from going into that phase. I can see no special advantage of this form of purse string and possibly a disadvantage or two. Primarily, of course, he does with one what is generally accomplished by two sutures, but in using his one suture he does more work and takes longer time than using two because he is adding the extra vertical stitch between the lines of the purse strings. Secondly, the through-and-through stitch gives a chance, probably theoretically, for the lower side of the purse string to carry and allow to remain on the outside of the gallbladder infective material, or leakage from the inside, while a Lemmert suture separately applied for the lower one obviates any possibility of this occurrence.

DR. CHARLES STOLTZ, South Bend: A paper on gallstone disease is always interesting because it gives us something to think of; either we are more positively convinced of our own ideas, or some one has given us new ideas to take home with us and think about. But I would like to know, what is the treatment for gallstone disease? The essayist has said that it is not always surgical, but medical and surgical. I never have heard of a medical treatment that could get away with the goods. I have followed several men who treated the condition with medicine, but I have never seen a cure develop. Being called out of bed at night to see a patient of this type to administer a hypodermic and go home is not delightful to the patient nor to the physician. When I have a patient with positive clinical symptoms of gallbladder disease I urge him to go to a hospital for a gallbladder or appendiceal exploration. Sometimes a mucus is found which will stop up the cystic duct or block it up, and after awhile, when the cone-shaped gallbladder has been returned to its proper shape, something acts on it which throws the valve back, and the patient gets relief. Whenever you have made a positive diagnosis of gallstones or gallbladder disease, operate. Not what to do after the diagnosis is made, but the

difficulty lies in the ability to make the diagnosis. When pain and other clinical symptoms are noted in the upper abdominal region, do what the Mayos do, explore. Go up to the Mayo clinics and see how they make exploratory diagnoses. Gallstones or gallbladder infections are properly surgical. Now I remember that no longer perhaps than a decade or two ago it was customary to open up the gallbladder, put in the drainage tube and not make an effort to find the stones. A good surgeon once said that all there was to do was to open the gallbladder and take out the larger stones, then let the others fall out when they pleased.

Open the gallbladder widely, get the liver clear out, drain the gallbladder duct and cystic duct, and if there are stones in any of the ducts get them out and make a finished operation. By surgical treatment for this type of cases we are not groping in the dark, but medically, we are. I do not know any medical treatment for gallstones except to go and give a hypodermic at night and then go home, which is no treatment at all.

DR. E. H. GRISWOLD, Peru: This is a subject that has not been thoroughly threshed out as yet and needs discussion. We have too many differences of opinion in regard to it. The first and most important thing in my mind is that we are attributing the cause to the disease and not the disease to the cause. Not long ago the Dental Medical College of Indiana was teaching students that pyorrhea was caused by uric acid in the blood. When the dentist found a patient with pyorrhea he held up his hands in horror and asked, "What is your doctor doing." He had the cart before the horse. Pyorrhea is the cause of constitutional disease, not the constitutional disease the cause of pyorrhea. Mayo says there is no pathologic gallstones, and it does not seem to me to be true. When the patient has chronic pains in the upper part of the abdomen, we say it is gallstones, but the majority of cases operated on show gallbladder infection, just as in operations for appendicitis. We have found that fecal congestions cause the majority of cases of appendicitis instead of cherry seeds as was once thought. Do not gallstones cause more diseases of the gallbladder than diseases of the gallbladder cause gallstones? When we operate we find that the gallstones have been there for years and years. It is not such an easy thing to diagnose gallstones or infection of the gallbladder. When your exploratory operation is made, then you know your disease is caused by that reason. How many times do we operate for appendicitis and find gallstones, and how many times for gallstones and find an inflamed appendix? The question cannot be answered always by the symptoms, for the symptoms are many times conflicting. You do not know whether it is a gallbladder infection, duodenal infection, or ulcer. In many cases, with complete history

and Roentgen ray, you can determine those things. But in many cases when we make a positive diagnosis of gallstones we find when we operate a gallbladder full of sand but no stones. In many cases we operate for other symptoms and find presented no semblance of the disease whatever. We find a gallbladder full of stones but the bladder perfectly healthy. As I said, do not we get the cart before the horse in laying the matter of gallstones at the door of an infected gallbladder?

DR. VINCENT A. LAPENTA, Indianapolis: The excellent paper of Dr. Williams has left little for discussers to say. Only I would add that gastric infections follow all lesions. The symptom is sometimes due to appendiceal and sometimes bladder infections. In this I am perfectly convinced by the enormous number of patients suffering from chronic dyspepsia, chronic ulcer of the pylorus, that we are getting too far away from the idea that the stomach is itself the cause of disease. I believe we are getting very far away from the reason. Frequent occurrence has been to find patients operated for chronic appendicitis and find chronic ulcer of the pylorus, and often we are talking so much about cancer prevention that we allow these chronic ulcers to go on for years. I would not say that chronic appendiceal infections do not cause gastric symptoms; they do. But they also cause ulcers, and I believe I am sustained by Dr. Rosenow and others in that statement. So the operation is not complete when we have in mind the symptoms of a chronic dyspepsia. Drain the gallbladder, but inspect the pylorus also, and if we do we will have to operate less often, curing our patient of many discouraging and painful symptoms.

DR. W. H. WILLIAMS, Lebanon (closing): The different methods of infection brought out by the discussants are interesting. These usually can be determined if we can trace the history of the cases carefully all the way through.

One other word about the treatment. I think my paper has been somewhat misunderstood. I am not an advocate of fruitola or any of these things that are claimed to eliminate gallstones without surgery, but it is not reasonable to say that every patient that comes to us with a pain in this region of his abdomen should be rushed off to a hospital for an exploratory operation to find that the gallbladder is infected and have it cut out. I have had some patients who will not do that. When symptoms show that the gallbladder is infected and medicinal treatment has failed to give relief, the right thing, if it is necessary, is to operate. But I think most of you will agree with me that you have patients many times who may have some slight gallbladder disturbance that will yield in a measure to some medical treatment. I am not an advocate of treating gallstones by medical methods, but it is an aid in a way, and as long as you can do your patient

some good you should not fail to use remedial measures outside of a surgical operation. We should not keep this up long with cases that are going to produce complications. Some of them will improve under medical treatment and some you will have to treat that way because they will not have anything else. You should not compromise yourself and your better judgment in order to hold your patient, but if there is anything you can do to benefit him in any way at all I think it is your duty to do it. But in those cases which are sufficiently positive that gallstones exist, there is no question but what they should be operated. I have seen some tendency in the discussants to talk gallstones all the time. The principal subject touched on in my paper was gallbladder infection.

The reference made to the zig-zag suture is noted. I simply mentioned it in connection with my paper because I use it and find it convenient. Objection was made to the piercing of the entire thickness of the inner gallbladder wall. If you want the stitch to hold you must put it all the way through. As to the length of time required in putting this stitch in, study the stitch a few minutes and it is very easily done. It does not take the time it does for a woman to embroider a doily, but it is very quickly and easily done. It will give results. Now if you do not want the edge inverted, do not use this stitch, but if you do want it inverted you will find this suture a very simple little thing.

CHRONIC SUPPURATIVE MASTOIDITIS ACCOMPANIED BY INTRACRANIAL PRESSURE

CASE REPORT *

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The temporal bone is the most important, complex and interesting bone entering into the formation of the skull. It not only contains within its interior the organs of hearing and equilibration, but supports on its surfaces equally important structures. It transmits through its interior the motor nerve of the face and supports on its apex the gasserian ganglion. It harbors the sigmoid, petrosal and a part of the lateral sinuses, while its interior is traversed by numerous minute blood vessels. Its inner surfaces are in direct contact with the dura mater, covering those parts of the encephalon resting on it. Its anterior surface is in relation with the mandible and parotid gland.

Situated in such close proximity to and containing so many important structures, it is surprising that pathologic conditions in this bone are not productive of more dire results than are clinically recorded. The fact that the organs of hearing and equilibration are contained within an almost ivory-like incasement accounts for the infrequent involvement of the labyrinth, but it is quite probable that many remote pathologic conditions of apparently idiopathic origin may be secondary to the focal infection within the temporal bone. Chronic middle ear suppuration is always secondary to acute infection and is comparatively frequent. Caries of the antrum and attic with cholesteatoma are not infrequent sequelae. Persistent fetid discharge which does not subside after local measures have been thoroughly tried out, is a positive indication for radical surgical interference. No where else in the human economy do we look with such toleration and complacency on a stinking discharge as we do in the suppuration which involves the temporal bone.

Intracranial complications occur, fortunately, at infrequent intervals; however, it is quite probable that in many cases they are overlooked or not recognized. The methods of transmission from the focal infection in the temporal bone to the intracranial contents is either through continuity of tissue, or by blood and lymph stream, or, perhaps occasionally via the nerve sheaths. Naturally, much difficulty is encountered in differentiating these intracranial conditions.

The following case, which I wish to report briefly, will illustrate:

Mr. G., aged 57, consulted me Jan. 25, 1915, at which time the following history was elicited:

Family history negative. At age of 17 was struck on the head by a baseball bat, at a point just posterior to the present wound. Was not permanently disabled at this time and the incident was soon forgotten. Had an attack of pneumonia at the age of 22. A few years later fell from a barn at a distance of 25 feet, lighting on feet and buttocks in a sand pile. A sharp hemorrhage from right ear and nose occurred. Patient was stunned, but in the course of an hour had apparently entirely recovered. Has had a foul-smelling discharge from right ear since childhood. The exact date of the beginning of this condition could not be ascertained. No treatment has been followed except an occasional washing when discharge became too profuse or very foul in odor. Has had a great deal of headache for the past ten years, particularly so during the past two years, pain being located chiefly in the vertex and radiating toward the frontal region. During the past six months pain has been persistent and continuous.

External canal full of foul-smelling pus, ear drum practically destroyed and middle ear full of granulation tissue polypi. Hearing reduced to a watch on

* Read before the Eye, Ear, Nose and Throat Section of the Indiana State Medical Association at the Indianapolis session, September, 1915.

contact. No tenderness over the mastoid region. Transillumination of mastoid cells showed bone to be eburnated. Caloric and rotary tests negative. Pulse, 72; temperature, 98.6. Vision six-sevenths in either eye, eye grounds physiologic, with no evidence of choked disk. Perimetric findings negative.

A tentative diagnosis of chronic mastoiditis, with either extradural or intradural abscess complicating, was made. Operation was advised immediately, but flatly refused. Did not see the patient again for six days. He continued to work, and February 2, eight days after the first consultation, he fell on the streets twice on his way to work. February 3 developed a paralysis in left arm and leg. Removed to hospital on the same day.

At this time he presented the following clinical picture: Cerebration slow, urine and feces involuntary, complains of severe pain in left temporal region and vertex, paralysis of left arm and leg, reflexes lost in left foot, normal in right, pupils equal in size, ocular movements slow. Temperature, 98.6; pulse, 70, full and firm. Patient drowsy most of the time. No neck rigidity.

Patient was operated the following day. Usual incision for radical operation. Bone excavated to antrum. There were no mastoid cells, bone being eburnated and cells obliterated. Antrum fairly high up and middle cerebral fossa dipping down between antrum and external table. It was impossible to reach antrum without exposing the dura on the floor of the middle fossa. Antrum and middle ear were full of pus and granulation tissue. Posterior wall was taken down. Whole middle ear was thrown into one large cavity, thoroughly curetted and scrubbed dry. Eustachian tube burred out; close inspection did not disclose any opening in floor of skull except that which was made during excavation into antrum. This was enlarged, cavity flushed out with normal salt solution, packed off and dura carefully inspected. It was not bulging, neither was it abnormal in color. It was incised; nothing was found. Incision was then continued from upper angle of wound to vertex. Skull was bared and a trephine applied $1\frac{1}{2}$ inches above the external auditory meatus. Second button was removed 1 inch above this and intervening bone removed with Divilbiss forceps. In upper half of opening dura was clearly bulging and looked pathologic. An incision 1 inch long was made through dura and about 6 ounces of straw-colored fluid mixed with chocolate-colored débris was evacuated; fluid was sterile; draining tube was inserted to bottom of the cyst. Upper wound was closed separately from mastoid and separate dressings applied. Flaps were then cut from the canal and postauricular wound closed with deep and subcuticular catgut sutures.

Patient left the operating room with pulse of 100. Following morning he had fairly good use of left arm and leg. Had some pain in head. He continued in this condition for five days, when he became somewhat restless and noisy, getting out of bed and removing dressings. Urine and feces involuntary. Complete paralysis of left arm and leg again ensued five days after operation.

February 10, nine days after operation, he developed convulsive seizures, twitching of mouth and lower jaw was continuous. Convulsive movement of right arm and facial muscles. Attacks occurred about fifteen minutes apart, partially subsiding, then beginning again. February 12 convulsive seizures of legs and

arms. Rational at times. At 4 p. m. had convulsion of entire body, which was relieved by morphin. Urine involuntary. Continued spasm of tongue and platysma; unable to see. February 13 patient very restless, talking continuously. Stitches and drainage tube removed. Patient remained in about the same condition for the next three days; drowsy at times; bowels and urine involuntary. February 15 more rational and able to carry on conversation at times. For the next ten days patient remained about in statu quo. February 26 projectile vomiting at 10 a. m. Rational at times. Complained of headache intermittently. February 28 slight vomiting, restless and rational at times. During all this time pulse varied from 70 to 80; temperature oscillating between 98 and 99. March 2 patient was able to flex left leg. Rational all day. From March 2 to 5 condition remained about the same. Quite restless, irrational at times, making attempts to remove bandages. Bowels and urine still involuntary.

March 8 decided change for the better. Patient slept and ate well, continued improvement in left arm and leg. By March 13 was able to sit up in a chair. Perfect control of bowels and bladder from this time.

Patient left the hospital March 22, six weeks after the operation. By April 15 the ear was completely dry, postauricular wound having healed promptly within the first ten days after the operation. Up to March 15 the drainage of the brain cyst had continued in large quantities each day, pale-straw in color. Much care had been exercised to keep the wound from becoming infected. At this time I directed the nurse to pay no further attention to this caution and deliberately allowed the wound to become infected, believing that by this time the brain tissue was well walled off and that the pus infection might tend to relieve the continual discharge. It very readily lent itself to this treatment and in a few days was flowing freely.

This flow of pus continued nearly thirty days, gradually lessening in amount. April 15, three weeks after leaving hospital, a smear was taken by the pathologist, Dr. Gookin, who reported it to be a pure culture of *S. P. A.* An autogenous vaccine was prepared and on the 15th the first injection given of 0.1 c.c., increasing by 0.1 c.c. every third day. The discharge lessened very materially and in twenty days had entirely ceased. The ear was perfectly dry, and patient had gained 12 pounds up to that time, May 5.

September 14 I examined this patient and found the following conditions: Temperature, 98.2; pulse, 74; blood pressure, 130 mm. Foot and knee reflexes on left side present but a little tardy. Patient weighed 139 pounds; professes good health. The ear is dry. Hears watch on contact.

Vision 6/7; 6/6, with + 075.

Cerebral cysts, for convenience, may be divided into four classes, parasitic, traumatic, apoplectic and degenerated neoplasms.

1. Parasitic cysts are due either to the cysti cercus or *enhi*nococi.

2. Traumatic cysts are not very clearly defined in origin; they may be explained on the ground of long-continued circulatory disturbances with consequent local accumulations of serum; or shrinking of cerebral tissues in the

region of injury, the result of sclerotic changes in the cerebral substances, the contraction leading to the formation of a vacuum which becomes filled with fluid derived from the surrounding membranes.

3. Apoplectic cysts. In this form the blood clot contracts, changes from a red to brownish color, due to the transformation of the hemoglobin into hematin. The pigment is diffused in the neighboring tissues, giving a yellowish tinge; the detritus is transformed and absorbed so that a cavity remains containing fluid, the so-called apoplectic cyst.

4. Degenerated neoplasms; cysts may be found, on microscopic examination, to be the end result of an almost complete degeneration of a glioma.

DISCUSSION

DR. EDWIN J. LENT, South Bend: I just wish to add a few words to my paper. In my judgment, this cyst had no connection with the temporal bone. Just why this man should carry this cyst for such a length of time, and it should grow to such an enormous size, and not cause motor symptoms, is rather inexplicable. However, one might think that the cyst growing so slowly, the cerebral tissues had adapted themselves to the undue pressure, and they reached the limit of accommodation when the motor symptoms suddenly developed. To me, the size of the cyst was enormous. It seemed pyramidal in shape, and followed the line of the Rolandic fissure, as you will note by the symptoms of pressure in the arm and leg area. The platysma was involved. So that the cyst was apparently trying to grow toward the apex and superior longitudinal sinus.

I offer no apology for the method of management. I am well aware of the fact that it is not in line with the rules and regulations of the treatment of cerebral cysts laid down. In my mind, it was impossible to wall it off and depend on subdural drainage. In the treatment of the case the end seemed to justify the means.

I have not gone into the neurologic side of the subject, because it is a subject for a paper by itself. I hope that matter will be taken up in the discussion.

DR. JOHN F. BARNHILL, Indianapolis: I had the pleasure of reading a part of Dr. Lent's paper, which he sent to me, but the last part of it I did not see. It takes up a subject which is always interesting, because it considers one of the most complex classes of cases that we, or any other class of surgeons or physicians are called on to deal with. Patients with these symptoms will drop into our hands at least once during our lifetime, and we see a great many cases of mastoid disease or brain cases; and you may have the pleasure or discomfiture of seeing more

than one. Hence, all of us ought to be ready to give some sort of a diagnosis when a case comes with symptoms such as the Doctor describes.

The doctor's oral argument at the last of his paper cleared up quite a bit of my argument. I was going to say that in so far as I was able to judge, from what he had in his written paper, that the ear had no relationship whatever to the cyst. In the first place, he found that the cyst contained sterile fluid, and that could not have been the case had some sort of connection with the ear existed, which was violently infected.

His diagnosis, as he describes how it was made, was made on too few symptoms, it seems to me. It must have been clear to the doctor that something was seriously wrong intracranially with this patient: otherwise he could not have made the diagnosis so early and on so few symptoms.

The diagnosis is one of the most important things here, and one that is going to trouble anyone who tries to make it. A rule which I have tried to follow is something like this: The patient comes and may or may not declare that he has a discharging ear. He may say he had a discharging ear two years before. Examination will show that the drum membrane is gone. He may say possibly that he has hardened wax in the ear, which is only so much dried pus, and which has been responsible for the breaking through of the pus into the cranial cavity, having penned up the secretion which was going on.

Dr. Lent's patient had been at work right along. He had no reflexes which would direct attention to the interior of his skull. The amount of discharge could easily come from a diseased antrum and from the numerous polypi there. And so it is my opinion that the doctor made a diagnosis on rather insufficient data, although the subsequent events proved that he made it correctly—not a brain abscess, but the equivalent, so far as symptoms are concerned.

When a patient comes, we examine into the condition of the ear, the condition of the external scalp, to see if there has been injury. We note carefully the pulse at all times of the day, and for many days, and also the temperature in the same way. We note the reflexes all times of the day and for many days. If we can get the patient to go to bed, and have a nurse in attendance, so much the better. I have not depended on my own judgment in these cases at all, because when I suspect a brain abscess or intracranial complication of any kind, I think it is rather too much for any one person to handle, and hence it is that we like the assistance of the Roentgen ray, although the Roentgen ray may not show anything. I also like the assistance of the neurologist, because he ought to be able to give a careful diagnosis of the focal symptoms. We like the help of the general practitioner.

because he may find something in a far different place that may account for all the symptoms present. But, after all, these things have to be gone into if we would find the reflexes that point focally. If we would find the cause of the persistent headaches, the cause of the vomiting, of which the essayist speaks, but which did not occur early in this case; the cause of the slow cerebration, the case must be thoroughly studied. With all these symptoms, any one almost ought to make a diagnosis of some sort of brain complication.

And then the operation which the doctor did is perfectly justified.

Cerebral cysts grow very, very large without very much disturbance. I have had one in my own practice, and I saw an enormous one in the practice of Dr. Mixter, a general surgeon in Boston. This child had a cyst larger than the fist. It was dissected out through the skull by Dr. Mixter, as suggested by Krause, which is the proper procedure when it can be done. When the cyst extends low in the middle fossa, as I presume this one did, the question would arise as to whether one should drain through the wound in the scar, as the doctor did. Of course, you get the lower drainage by going into the mastoid wound, but he did not desire to infect the field, and consequently I presume he kept it entirely separated by not going through the other way. Most brain cases are cured by draining at the bottom, unless you can dissect the cyst out completely. The cyst in this case refilled and caused these symptoms of which the doctor speaks, namely, convulsions, and the other very marked cerebral pressure symptoms. Is that not so, doctor?

DR. LENT: No; the cyst was discharging very freely.

DR. BARNHILL: How do you account for the symptoms?

DR. LENT: I do not know. Was it a meningitis serosa? I do not know. That was what I wanted to bring out in the discussion.

DR. BARNHILL: The doctor is to be congratulated on the excellent outcome of the case. As to the infection of the cyst, I do not know of any precedent for it. I should have hesitated myself, but the outcome speaks for itself. It was very extraordinary, but the patient is well, and we never can speak against that sort of thing effectively. But I believe that if the doctor were treating another similar case he would be just as careful not to infect as he was in this case, although the infection possibly caused the closure of the cyst, just as a curettement might have done. But the dissection of the cyst, freeing it entirely from the brain cavity, would probably have done it at an earlier date than by the infection of the cyst wall.

DR. GEORGE F. KEIPER, Lafayette: I have never seen a case of brain cyst, so am really not

competent to discuss a question of that kind. Of course, we all have seen cases of brain abscess. Inasmuch as a brain abscess is not involved in a case of this kind, it is not pertinent to bring it forward. This case, however, demonstrates but one thing to us, namely, that with a persistent running ear, such as this patient is reported to have had, the probabilities are that there was inflammation that traveled upward, some way or other, into the cranial cavity, and set up there a process which ultimately resulted in a brain cyst. The question occurs to me, in this situation: How many brain cysts after all might be due to trouble within the middle ear?

DR. LENT (closing the discussion): I have nothing to say in closing. I had hoped that somebody would take up the differential diagnosis between a meningitis serosa and a brain cyst. You will recall, in the history of this case, that the morning following the draining of the cyst the patient had fairly good use of the left arm and leg, showing that the motor pressure was relieved. Five days later he developed paresis, with complete convulsive seizures; also complete spasm of the platysma on both sides. The patient apparently had a general cerebral involvement. Whether there was meningeal irritation or not, I do not know. I do not know how any one can tell. The temperature and pulse remained practically normal. The temperature never went above 99; pulse was 70 to 80. The man was apparently normal, with this meningeal irritation and the focal symptoms going on.

I think one lesson to be learned from this case is that we ought to look for these symptoms and cysts once in a while. I was somewhat asleep on the job. My diagnosis was wrong. I flattered myself that probably the rest of you had done the same thing. I had no occasion to think of cerebral cyst. The persistent discharge from the ear, and suddenly developing focal disease made me think the man had a cyst in the temporosphenoidal lobe, but such a large cyst on the cerebrum had not entered my mind.

I think this case might teach us, when we get these intracranial lesions, to stop and think of many things, with which we might have to deal. I thought that opening and draining the cyst was the best thing to do. We could establish the drainage afterward. Drainage seemed safer than attempting to dissect it out.

As Dr. Barnhill said, if I had another case of this kind to deal with, a smaller cyst, I would attempt to dissect it out.

After draining from four to six weeks, the cerebral tissue proper was well walled off, and I think it was quite within the pale of propriety to deliberately infact it, to destroy that serous membrane and cause it to collapse, and then by an autogenous vaccine clean it up.

THE DEFENSES OF THE UPPER RESPIRATORY TRACT AND THEIR PRESERVATION *

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The natural defenses of the body are essential and inherent elements of each involuntary act, whose operation completes the events concerned in any one physiologic process.

First, the circulation of the blood is provided with protective measures, that operate both through the central nervous system and the blood itself. The various degrees of pressure required by the peripheral and general circulation are maintained by one, while the plasma and leukocytes are ever alert to any demand that may be made on them. Digestion also is well guarded by the nervous control of its muscular and glandular activities, and the protective chemical changes that are constantly taking place along the entire canal.

Likewise, the upper respiratory tract is well provided with defenses, which are component parts of each function of the breathway. And since the physiologic demands of this part of the body are supplied primarily by the respiratory, olfactory and reflex acts, together with the part played by Waldeyer's ring, a careful study of each one of these will reveal the natural defenses in this region of the body. The study of each defensive element separate from the act of which it is an integral part, is hardly possible, since the relationship of one to the other is so necessary to a perfect working of the whole. Each functional act, with its corresponding defense, working in harmony with all the other acts and defenses of the body, maintains the proper relation of all the bodily activities. But any weakened defense or any imperfectly performed physiologic function will not only destroy the mechanism of the part involved but will embarrass to a greater or less extent the defenses and acts in more remote parts of the body.

The respiratory function of the nose is controlled by defensive means that involuntarily serve to maintain the proper amount, quality and physical conditions of the air entering the breathway.

It makes little difference as to the temperature of the air that gains access to the nose; its immediate contact with the mucous membrane of the turbinal bodies raises or lowers the

temperature to the required degree in preparation for its reception by the lower respiratory tract, thereby protecting the lower tract from sudden changes in temperature and humidity, and eliminating the possibility of shock and irritation to the more delicate structures below.

The moisture thrown off from the swell bodies amounts to considerable in twenty-four hours. The inspired air saturated with this moisture is carried to all the remote parts of the lungs and facilitates a more rapid and complete interchange of gases in this region that is not so well provided with defensive arrangements.

The humidity of the air is constantly changing, and, regardless of the fact that it may be surcharged with moisture, or is proportionately dry, the nasal mucous membrane provides a means that automatically changes it for its reception in the lower channel.

The olfactory function of the nose is out of direct line of the respiratory air currents, yet for a successful performance of its work it is dependent on the emanations from these air currents. The sense of smell is a physiologic function maintaining defensive arrangements—the detection of harmful odors, irritating elements of the air, is a protection that is very essential to our well-being, and is probably as important as the gratification that results from savory air currents.

The reflexes of the upper respiratory tract are related to the other defenses in this region. Normal nasal reflexes are very sensitive to any stimulus coming through the sympathetic and vagus, from the emotional and functional life of the individual, and very quickly respond to this stimulus in various ways as increased secretion, lacrimation, sneezing, enlargement of the swell bodies and cough. Again, these reflexes may become exaggerated from local changes within the nasal cavities, and the hypersensitive areas intimately associated with disturbances more remote as dysmenorrhea, asthma, hay-fever, migraine and cardiac neuroses. Whether or not these exaggerated reflexes may be classed with the normal reflexes as defensive provisions, we must feel that a part of the body that is so susceptible to local and remote stimuli, and which so quickly responds to the varied demands made on it, is worthy of the most intelligent study.

The above physiologic activities of the nose with their attending defensive provisions, perfectly performed, prepare the way for two of the most important general functions of this part of the body, ventilation and drainage.

* Read before the Eye, Ear, Nose and Throat Section of the Indiana State Medical Association at the Indianapolis session, September, 1915.

Adequate ventilation of the nasal chambers, sinuses and the postnasal space, serve to maintain on the one hand the useful purpose for which the defenses operate, and on the other hand, to sustain the integrity of the mucous membrane in the remote parts of the nasal cavities.

The drainage of this area with its ever-changing degree of moisture is probably the most important end result of all the activities of the nose.

The accumulation of the glandular secretions, the serum from the swell bodies, and the mucus from the surface in general, must be properly cared for to insure the complete operation of the physiologic acts and defenses in this region.

Adequate drainage and ventilation go hand in hand with the other activities of this area, physiologic and defensive, and the successful operation of one is so dependent on the proper performance of the other, that any break in the physiologic link not only impairs the local mechanism of the part, but lays the foundation for disturbances far removed from this source of trouble.

Further down in the upper respiratory tract is a collection of lymphoid tissue whose relationship to the surrounding parts and to the economy in general has not been accurately determined. We know of the local and remote effects of diseases and changes in Waldeyer's ring, but as to its accurate placement in the physiology of the body we are still in doubt. The fact that its greatest period of development is in the earlier years of life, and after that time atrophic changes are known to occur, may well lead us to look on it as a defensive arrangement in the early development of the individual. The crypts and channels of the tonsils connecting directly with the cervical lymphatics is in direct line to carry foreign material to the lungs, if the defensive epithelium that protects these channels have been weakened by the inroads of bacteria and the consequent attacks of inflammation. The local disturbances resulting from hypertrophy in Waldeyer's ring are serious enough, but probably are not as far-reaching and destructive as the many serious and often permanent constitutional maladies that come as the result of the impaired defenses in the lymphatic channels of these structures.

The physiologic functions of the breathway with their attending lines of defense are ever alert to the changing conditions around us, and are always operating in harmony one with the other. But in a large percentage of individuals

it may be otherwise. Either one or more of the physiologic acts of the tract are imperfectly performed, or their attending defenses have had such demands made on them that they become inefficient; and the circle of events that occur in this region becomes a laboring mechanism that often enough is a menace to the development and health of the individual.

In order to preserve these natural defenses it is necessary to know the conditions that prevent their successful operation, and even in some cases prevent the individual from beginning life with this asset that means so much to his future development and growth.

Imperfect and faulty development, congenital lesions, and conditions of environment are probably the causes most concerned in the pathology of this region.

Imperfect development of the facial bones has a great deal to do with the work that is to be performed by the nasal structures. Imperfect adjustment of the hard palate prevents to a great extent the normal relation of the septum to each nasal chamber, thereby making quite a difference in the columns of air entering the nose. The difference in air pressure in the postnasal space always results in changes in the mucous membrane in the immediate neighborhood of the obstruction, and indirectly inhibits the functions of the remaining part of the nasal cavity.

The unequal distribution of air in the nasal cavities and postnasal space embarrasses the normal functions and defenses that are trying to care for this part of the body. The air improperly prepared and distributed ultimately produces local changes in the mucous membrane of the turbinates and sinuses, whose damaging effects do not always remain local. Ventilation and drainage primarily are interfered with, which directly affects each separate function and defense of the breathway. Constitutional infections and disturbances often enough result from the imperfect operation of the defenses in the lymphatic channel. Proper ventilation and drainage then can occur only where the physiologic functions and defenses are not impaired by obstructive and degenerative changes, from either local or constitutional causes.

Congenital lesions, specific or otherwise, are often responsible for irreparable damage to these delicately adjusted structures, and bequeaths to the individual a handicap with which he must reckon throughout life; the correction of these things being a prenatal problem, which involves legal as well as medical measures for its correction.

Conditions of environment in which the anemias, malnutrition and some organic constitutional disturbances produce structural and functional changes in the upper respiratory tract, require of course general as well as local methods to preserve and improve the defenses in this region.

A knowledge of the physiologic defenses reveals the fact that the relation of the upper respiratory tract to the development and growth of the body is so intimate that a study of the local changes, without noting at the same time the constitutional requirements of the individual, will often accomplish very little; and the preservation of these defenses and the restoration of those already destroyed or impaired depends altogether on how thoroughly we understand the conditions presented in each individual case.

One of the most forward steps in this direction is the medical inspection of schoolchildren. At this time of life when the children and a great many parents need educating along these lines, this departure in school work will awaken in those who often are otherwise negligent in understanding its importance, the fact that children laboring under functional and organic defects of the upper respiratory tract are ill developed and inefficient, both mentally and physically. And this educational movement gives to the parent and child a responsibility that determines his fitness for equal competition with his fellows. The early correction of these defects liberates in the child mental and physical activities that would otherwise remain dormant.

The weakening of the activities of the nose and throat through developmental defects constitute a large number of cases that we see, and the correction of these things require both medical and surgical measures.

Preserving the natural defenses of the upper respiratory tract is simply maintaining the physiologic functions in their fullest efficiency, since the defenses are related parts of each function.

If by removing pathologic lesions, whether obstructive or degenerative, we are able to restore in a measure the lost physiology of the part, it should be done at a time of life when this condition has not progressed to secondary changes. Surgery of the septum and middle turbinal region in providing good ventilation and drainage to the nearby sinuses, offers a great field in protective measures to secondary changes in the sinuses, postnasal space and the ear.

The natural defenses that become impaired by the various infections that occur in the

sinuses, postnasal space and the ear, may be reinforced to a great extent, after thorough drainage and ventilation is provided, by defenses acquired by properly prepared vaccines.

The septum and middle turbinal region may be attacked surgically with the assurance, if done early enough, that the defenses will not be injured but improved. Other nasal structures unless otherwise damaged or destroyed as to their functions cannot be removed without interfering with the vital function of the part. The integrity of the mucous membrane should be preserved, if by other means we think that the secondary changes will disappear by proper ventilation and drainage.

The removal of the lymphatic tissue in Walden's ring is justified when the hypertrophy interferes with the drainage and ventilation of the postnasal space, pharynx and the ear, and when these structures through repeated attacks of inflammation have lost all their defensive elements and are a menace to the general health of the individual.

A part of the body, then, which is so sensitive to the functional, constitutional and organic disturbances, demands and is entitled to the utmost respect from those who make it a study.

The physiologic defenses that respond to the functional, emotional and constitutional changes of the individual, whether these changes come through the circulation, lymphatic or nervous system, demand an adequate understanding of their origin to interpret properly the local evidence presented.

The local organic disturbances in this region are entitled to the same painstaking study to completely distinguish them from the changes brought about by the functional and constitutional disturbances so that the medical and surgical corrections may be intelligently undertaken.

DISCUSSION

DR. GEORGE W. SPOHN, Elkhart: The essayist has given us a good paper, which no doubt was enjoyed by the audience. His treatment of the theme, subjectively, makes it more difficult for the discussants than it would have been had he pointed out the pathologic conditions that interfered with normal respiration. The statements with reference to the functions of the nose and pharynx are in accord with the teaching of our physiologists.

I have noticed that when an author or a physician of prominence makes an assertion, the profession generally accepts his conclusions without the necessary proof. This is no doubt because the large majority of physicians have no opportunities for research work. The last sixty years have given many functions to the

tonsils. The subject has been discussed from various angles, and yet no one has given satisfactory proof of the functions of tonsillar tissue. We accept the present theories because we have nothing better.

If the rhinologist gives the proper attention to the mechanical arrangement of the nose and throat, he will have less trouble with the physiologic requirements of the system. With a knowledge of physics, he should be able to recognize the needs of the patient and the methods necessary for the correction of any abnormality.

An interference with the upper respiratory tract, as nasal obstructions or pharyngeal defects, may cause an infection of the general system, reflex disturbances, or interfere with the proper oxygenation of the blood. Observation and the various means of differential diagnosis will demonstrate the focal point or eliminate the nasopharyngeal infection. The elimination of all points of irritation will correct any reflex symptoms. The pathologic nasopharyngeal canal does its greatest injury to patients by preventing proper oxygenation of the blood.

Haldane and Smith have shown that during nasal respiration from 1 per cent. to 2 per cent. more of oxygen is taken into the system than during mouth-breathing. Knowing this, it should be apparent to any mouth-breather that his morning headaches, stupid feeling, restless sleep and apoplexy may be caused by carbonic dioxid poisoning. It is a scientific fact, if the system is lacking in oxygen it must hold an excessive amount of carbon dioxid.

The capacity of the lungs is known. It also is known how much pure air a person needs to retain a healthful state. The size and conditions of the nares are very important; the desideratum sought is to supply enough pure air, warmed, moistened and cleansed, through the nares for the proper oxygenation of the blood. With the patient in the reclining position, the nasal space should be large enough, during quiet breathing, to accomplish this. If the patient has a facial deformity, or is in lack of nasal space, the judgment of the surgeon should suggest the means for the proper supply of air. But to supply nasal space by the indiscriminate removal of the turbinate bodies should be discouraged. "The slaughter of the tonsils" has caused much discussion in medical literature and medical societies, but the slaughter of the lower turbinates is doing more injury to our patients. It may not be mentioned in our textbooks, but those who have been doing this line of work for twenty or more years have observed that the bodies atrophy at 30 or thereafter. In fact, in many patients who have reached the age of 50 the whole nasal mucosa has so atrophied, and the nasal space enlarged, that even without previous surgery such patients suffer with a dry pharynx and the diseases resulting therefrom. In excessively large nares the air current will lack the needed moisture, warmth and filtration.

Besides, the patients do not have the proper oxygenation of the blood, and, of course, would be suffering with carbon dioxid poisoning.

For the defense of the respiratory tract every case should be carefully studied, and with the aid of the family physician and the dentist practically all cases can be relieved, if taken in time, and due consideration given to the natural functions of the various organs of respiration.

DR. PAUL B. COBLE, Indianapolis: I believe that the upper respiratory tract must be kept in the best possible condition. This is essential to good health and the general well-being of the individual. We are aware of the effects of acute and chronic infections of this region, both locally and constitutionally, and it is nearly impossible to dwell too much on the evil results of obstructive lesions of the nose and nasopharynx.

Impaired defenses simply means that the individual possessing them is handicapped, not only from the impairment alone, but also from the pathologic changes thereby resulting.

Dr. Culmer expresses my own views in regard to the medical inspection of schoolchildren. Much good undoubtedly can be accomplished in many instances. Especially is this true where parents are either too negligent or through fear fail to have needed operative procedures adopted for the relief of obstructive lesions of the upper respiratory tracts of their children. With the advent of the Sluder technic for the removal of tonsils in children, parents have no need for alarm. We have found the district nurse and the social service worker of the greatest help in the university clinic, and through their aid we are able to give oftener the attention that many children need.

Dr. Culmer states that the septum and middle turbinal region may be attacked surgically, with the assurance, if it is done early enough, that the defenses will not be impaired but improved. I would like to ask Dr. Culmer how early in life he deems it wise to carry out such operative procedures?

DR. W. S. TOMLIN, Indianapolis: I wish first to commend Dr. Culmer for his very excellent paper in dealing with the basic principles of our work. The situation in the normal individual is one of a drawn battle between the presence of pathogenic bacteria in the nasopharynx and the nose and the forces of the system. The child who is under par, having defective breathing spaces or inflammatory conditions—chronic though they may be, and hard to determine in some cases—is at a very serious disadvantage. He is repeatedly catching colds, which interfere with school work, both as to concentration and vision, and children in school are many times put down as mentally defective because of these difficulties which interfere with their cerebrations, with their memory and clear thinking. The inspection of schools and our social service workers have a tendency to bring us into contact

with these cases early, and I am a sincere believer in early interference in cases where it is indicated. For instance, in cases of defective tonsils which are interfering with the child, and in which we are sometimes asked how early they should be removed, my impression is that they should be removed as early as they give trouble. The work to be done in the nose is somewhat different, and yet I am free to say that my position is a little different from that of most operators in connection with the nose. I make submucous resections as early as 8 years of age, and I think I would be inclined to make them even earlier, provided the condition was sufficiently pathologic to demand that the child should have more nasal space.

DR. CULMER (closing the discussion): The paper was just intended to be a review of the upper respiratory tract, and bring before us a little more clearly the importance of remembering the interrelationship of the disturbances in the nose and throat with those that come in other parts of the body. Dr. Coble asked how early the surgery of the septum and middle turbinal region should be undertaken. It has been my experience that I do not care about doing those things until after puberty or until puberty, at least, or before they begin to cause secondary changes in the nose and throat.

RADIUM TREATMENT OF EPITHELIOMA

THOMAS C. KENNEDY, M.D.
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Those who have kept in touch with the work being done with radium, in the treatment of cancer, realize the great good that is being accomplished. Abbe, Kelly, Williams, Janeway, Clark and others in this country; Wickham and DeGrais in France; The Radium Institute in London; Czerny, Caan, Wertheim and others in Germany; have given evidence of the value of radium in the treatment of cancer.

Radium is of great value in the treatment of cancer of the uterus, rectum, breast, and all other locations, but more especially indicated in superficial skin lesions. Thousands of cases have been treated in this country and Europe, and sufficient time has elapsed to prove conclusively that there are fewer recurrences after clinical cures with radium than with any other method. In epithelioma of the eyelids, nose, lips and mouth, radium is the treatment of choice. The treatment is painless and the cosmetic results are better than after surgery or caustics. Occasionally we get a recurrence after

the use of radium, but it usually yields to a few further applications of the remedy.

Radium Therapy is such a broad subject that it is impossible to cover more than a small part in the limit of this paper, and, therefore, the scope of this article will be limited to epithelioma of the face and mouth. At least 80 per cent of lesions about the face can be cured with radium, if seen early enough. Surgery and caustics will cure many cases, but radium undoubtedly gives the best results. In this class of cases surgery is never necessary except in very rare instances. Epithelioma on the mucocutaneous margin of the lips or nose is not so amenable to treatment as are the lesions on the cutaneous surface, or wholly on the mucous surface. However, in many lesions of this character that are not curable, the pain and swelling are greatly relieved and the disease checked by the use of radium. We are frequently confronted with cases that have been cauterized, X-rayed, treated with carbon dioxide, electric needles, fulguration, and other methods. As a result of these different forms of treatment a dense scar is produced that does not readily yield to radium therapy. I have had two cases, however, that did not yield to the X-ray but were healed with radium and have had no recurrence. Occasionally I have seen a slight dermatitis follow the treatment, but not nearly so marked as following the Roentgen Ray exposures. In some instances, some of the normal tissues may be destroyed in the efforts to destroy all the cancer cells, but the burn will readily heal. I have as yet to see a severe burn from radium. In the treatment of epithelioma of the eyelids, nose or face, it is rarely found necessary to use more than 10 mgs. of radium element, while in epithelioma of the tongue or of the lip, involving the mucous membrane, much larger dosage may be required. The result in very late cases with any treatment (radium, surgery, X-ray, etc.) are not curative and frequently not even palliative.

Speaking of radium, Dyer¹ said, "Its use is yet in the experimental stage, but the results reported by the various observers, and those obtained by the author of this paper, justify the opinion that it is a valuable remedy, when employed intelligently, and in skin cancer, it has a certain known therapeutic efficacy."

Ewing² says, "At present the only laurels in cancer therapy are being carried off by physical action, X-ray and radium, and it seems to be only the difficulties of accessibility and dosage, which stand in the way of successful applica-

1. Dyer: *Interstate Med. Jour.*, xxii, 7, 729.

2. Ewing: *Jour. Cancer Research*, i, 1, 85.

tion of this action to all localities, and some generalized tumors. . . . It is not too much to hope that when the early stages of cancer are recognized, as a proper field for the use of X-ray and radium, as has already occurred in the opinion of some competent authorities, much of the present fear of the disease, especially of the most deplorable postoperative recurrences, will be removed. In such an event, some of the present problems of cancer will retain only an academic interest."

Care must be taken not to allow radiation beyond what the normal tissues will stand. In the beginning of my experience with radium, I was fearful of the effects of massive dosage and began with great caution. Never having seen any untoward effects from the use of radium applied through a filter, and not getting the desired effect in some of the more obstinate cases, I cautiously began the use of it unscreened, using only the air as a filter space. Although finding a greater resulting erythema, which at first seemed alarming, there was a more speedy cure. Following the application there is an erythema of the tissues surrounding the lesion. In two cases there was a dermatitis so severe that it simulated erysipelas. About three days after the application of the radium to ulcerating surfaces, a soft crust forms, under which there is a slight discharge. The patient is cautioned not to disturb the scab in any way, but let it alone until it loosens and comes off, which occurs in two or three weeks. When this scab comes off, a smooth, white scar remains. The cosmetic effect in every case has been far better than I have ever seen after surgery or the use of caustics.

In the treatment of epithelioma of the nose, eyelids, etc., I have almost entirely abandoned the use of metal screens, and simply use the 10 mg. applicator of radium (20 mg. radium sulphate, containing 10 mg. pure radium element) and using the air space of $\frac{1}{2}$ inch. In some of the more refractory cases, I apply it directly to the lesion. In cases of epithelioma of the tongue, it is necessary to use from 40 to 60 mgs., which is screened with a metal filter.

The relief from pain is frequently noticed after one treatment, and after two or three treatments there is usually a distinct change in the lesion. The discharge is checked, if there is an ulcerating surface, with a perceptible shrinking of the lesion. It has been the custom of the profession to advocate operation for all skin cancers, but as practically all of them can be cured with radium it should be tried before resorting to an operation.

In superficial lesions, radium is applied in a sealed glass tube. If filtration is deemed neces-

sary, the tube is placed from $\frac{1}{2}$ to 1 inch from the lesion, giving the "air space" filter. The glass tube is wrapped in a small piece of gauze and held to the place with a small strip of adhesive plaster. As a rule, the first treatment is for one hour. I am firmly convinced that all epithelioma, wholly on the cutaneous surface, can be cured with radium, if it is at all amenable to treatment. In other words, any epithelioma of the skin, that does not yield to radium, cannot be cured by any other known methods. While in two extreme cases there has been no marked improvement, there has not been a single case stimulated by the use of radium as has been noted by others. An exceptionally small per cent of cases of epithelioma of the tongue are benefited by surgery, and oftentimes are made worse, glandular involvement ensuing rapidly. Frequent disappointments are met in the surgery of cancer, and men who have had large experience with radium do not claim it as a cure-all. It can no longer be questioned, that, in the treatment of cancer of the face, radium is undoubtedly the method of choice.

It is only by experience, that we can tell whether to use a large amount of radium, thoroughly screened, or, to use a lesser amount, either screened or unscreened. As a routine practice, 10 mgs of radium is used, screened with the "air space." In some cases, the application is made direct to the lesion. In a very small per cent of the cases it will be found necessary to use 40 mgs., or even 50 mgs., but these are exceptional. The cases herewith reported were treated with 20 mgs. radium sulphate, 50 per cent. strength, containing 10 mgs. radium element. In speaking of the amount of radium used, it should refer to radium element contained, as it is used in the form of a salt of varying strength. Only a few typical cases will be reported here, as it is deemed unnecessary to report many cases in detail.

CASE 1.—Miss V., referred to me by Dr. Denny, of Madison, Ind. Maternal aunt died of cancer of uterus at 60 years of age. Another maternal aunt died of cancer of face. Father died of Hodgkins disease at the age of 75. Mother died of pneumonia. As near as she remembers, in 1897 she noticed a small ulcerated spot on the right side of forehead. She first received treatment in 1901 with caustic paste. Under this treatment it healed and remained apparently well for several years. Treated again in 1906 but it did not get well. Was treated again with caustic paste in 1907. The ulcerated spot did not heal, but a very large scar was produced by the treatment. In 1908 was treated with X-ray about 1 dozen times, and in 1909 took a few more treatments, and again in 1910 without results. In October, 1911, car-

bon dioxid snow was used without healing. When I first saw her she had a large scar about the size of a dollar on the right side of her forehead. There was a crust in the center of the scar about the size of a quarter, which was very sore, tender and painful, and there was a tendency to bleed on touching it. Radium was applied for a period of one hour each alternate day for two weeks, then applied once a week for about two months. Lesion entirely healed and she apparently is cured.

CASE 2.—A. J. B., Columbus, Ind., surgeon, age 66. No family history of cancer or tuberculosis. Father died at the age of 74 of organic heart disease. Mother died at the age of 86 of double pneumonia. Patient had an erosion of tongue for several months which refused to heal. Silver nitrate 40 grs. to the oz. was applied without results. The tongue was so sore he could not masticate his food and had lost weight. Troubled with constipation. He was treated every alternate day for two weeks with radium, and then at intervals of once a week. The lesion began to heal after a few treatments, and was apparently cured after two months.

CASE 3.—Mrs. D., age 63, referred to me by Dr. Osterman, of Seymour, Ind. No cancer or tuberculosis in family. A scaly spot appeared on the right side of her nose about 5 years ago. It was treated with salves, powders, and I think from the description, also with caustic paste, without results. When I first saw her, there was an ulcerated spot on her nose about the size of a dime, which bled on touching it. She has had 16 applications of radium of one hour each, and is clinically cured.

CASE 4.—Mrs. T., age 52, referred to me by Dr. F. C. Heath of this city. Mother died of cancer. About 18 years ago a small lump appeared on right lower eyelid. She consulted a physician who informed her it would not amount to anything. About 5 years ago it began to break down. Paste was applied about 3 years ago but it got worse. About 1 year ago she began treatment with X-ray and continued for about 6 months. Lesion seemed to get some better but never healed. The eye was very painful and there was destruction of the inner border of the lower lid. Eyeball red, inflamed and tender. She was advised by one eye man, to have the lower lid operated, which she refused. Several others declined to give any treatment. Pathological examination showed it to be an epithelioma. Radium was applied for two hours and was repeated at the end of a week. This seemed to aggravate the condition, and the period of application was reduced to one hour. The application was made once a week, for a period of three months. The ulcer has completely filled in with new tissue. There is a slight granular condition which persists, but it is diminishing gradually. The eyelid shows but little of its former destruction. She is still taking an occasional treatment.

CASE 5.—Mr. P., aged 80, referred to me by Dr. Sims of Frankfort, Ind. Had large mole on left side of upper lip for years. About two years ago it became inflamed, discharged pus and formed a crust over the top. Painful at times. Pathological examination showed it to be an epithelioma. Application of radium was made at intervals of one week, and after 15 treatments, he is apparently well.

CASE 6.—Mr. K., age 54, engineer. Father died of cancer of the ear at the age of 82. He had an epithelioma over the left malar bone, which was removed with paste in December, 1913. It recurred in January, 1915. Increased gradually until at the time I saw him, it was as large as a dime. Application of radium was made at intervals of one week for about two months, and then at intervals of about once a month. After the third treatment there was relief from pain, and beginning retrogression of the lesion. He is clinically cured.

CASE 7.—Mr. K., age 67, brother died of cancer of the rectum. One aunt died of cancer of the breast. He first noticed a slight lesion on left cheek in August, 1914. This increased until it was about one-half inch in diameter, ulcerating, with a tendency to bleed and covered with a thick crust. Three treatments with radium of one hour each, at intervals of about 10 days, healed the lesion, and there has been no recurrence.

Patients who have been clinically cured should be kept under observation for several months, and they are instructed to the effect that the slightest recurrence of the lesion the treatment must be renewed at once.

CONCLUSIONS

Radium is not a cureall by any means, but it will cure every case of epithelioma that is amenable to treatment.

Those who are skeptical about the results obtained from the use of radium are the uninformed.

Radium, intelligently used, is a painless, safe and efficient method of treating malignant skin lesions. It is the treatment of choice in epithelioma of the face, and the cosmetic effects are better than with any known method of treatment. This means much to the patient.

The number of treatments varies. Improvement usually is noticed after two or three treatments, and frequently after the first.

The analgesic action of radium is very marked and frequently noted following the first application.

It is claimed by competent physicists that there is a decided difference in the physical properties of X-ray and radium. Radium has cured cases in which the X-ray has failed.

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EDITORIALS

**SIGNIFICANCE OF PERSISTENT HIGH
BLOOD PRESSURE**

A physical examination is incomplete without recording the arterial blood pressure. The state of the blood pressure very often is one of the most helpful objective findings. It gives the physician an idea in figures of the extent of the underlying pathological changes that lead to a deviation of the pressure from the normal.

The normal blood pressure varies within certain limits, but on the average may be said to range from 120 to 150 and even to 160 in older individuals. It is estimated by means of any one of the good sphygmomanometers now on the market. The point at which the pulse is completely obliterated is taken as the systolic pressure and the point at which the swinging of the dial is the widest is taken as the diastolic pressure. The difference between these two is the pulse pressure. The auscultatory method of determining blood pressure has been and is even now used very widely, but it seems to be uniformly agreed that it has no advantages over and is no more accurate than the other method in general use.

For ordinary clinical work the estimation of the systolic pressure is the most important. When it is found to be above normal it usually indicates some internal change or changes. Just what is the specific cause that leads to the condition of increased blood pressure or arterial hypertension is not definitely known. From experience it has been found that arteriosclerosis and chronic nephritis are the two clinical conditions most commonly associated with hypertension.

Transient hypertension is in itself of some significance. It arouses suspicion and indicates that the person manifesting such a symptom should be under observation. Perhaps it may serve as a flash of warning of early changes in

the vascular or renal systems, and it is of the utmost importance to the patient that his physician should recognize any form of disease in its very earliest stages.

Persistent high blood pressure is of great significance. A very eminent American clinician has stated that a pressure which is constantly above 200 indicates chronic nephritis. Associated with the nephritis are the usual concomitant cardiovascular changes, and the symptoms that are present are caused by the sum total of all the internal changes.

It is well to emphasize this idea that persistent hypertension indicates chronic nephritis. The nephritis may be secondary to generalized arteriosclerosis or it may not. Arteriosclerosis may occur without changes in the kidney marked enough to constitute a real chronic nephritis. Strictly speaking such a kidney presents the pathological change designated as arteriosclerotic nephritis. In such a case the blood pressure is apt to be increased but not a great deal. We would expect to find it usually below the 200 mark. The factor or factors that lead to Bright's disease, however, invariably cause arteriosclerotic changes also, so that chronic nephritis and arteriosclerosis are concomitant. In such cases the blood pressure is constantly elevated and tends to remain high in spite of all treatment.

The general tendency on the part of laymen to regard high blood pressure in itself as a very serious and alarming trouble ought to be corrected. The laity is inclined to regard hypertension as a disease rather than a symptom and to overemphasize the significance of it. Perhaps the physician more than any one else is responsible for the prevalence of this idea. There can be no doubt that in cases of very marked or extreme hypertension there is always a real danger, one that must not be minimized. Mild or moderate increase of blood pressure, however, in itself, implies no real danger.

The fact should not be lost sight of that an increase in the blood pressure is a compensatory phenomenon. It occurs in response to changes affecting the circulatory system whereby the resistance of the peripheral or capillary circulation is increased. To overcome this increased resistance a general rise in the blood pressure is needed and occurs. Too great a reduction in the blood pressure by therapeutic measures, if possible, would therefore not be wise in many

cases. It may lead to embarrassing, if not serious, consequences. As an index of the degree of involvement of the renal or vascular systems or both, the blood pressure is of very great value to the clinician, but it need not override every other clinical consideration so far as the disease and the treatment thereof is concerned. A rational, conservative view of the significance of persistent high blood pressure is the one to be taken. Like every other objective finding the blood pressure should be correlated with all the other signs and symptoms. Its significance can be estimated most intelligently when it is considered as a link in the chain of clinical evidence obtainable in each individual case.

THE NATIONAL BOARD OF MEDICAL EXAMINERS

THE National Board of Medical Examiners of the United States has been organized to fill the need of a standard medical examining board for the whole United States and its territories. The board is voluntary, and the permanent organization will consist of the three Surgeon-Generals and one other representative from each of the government medical services, three representatives of the Federation of State Medical Examining Boards, and six members chosen at large from the medical profession by the National Board of Medical Examiners. The original board consisted of fifteen members, as follows, and remains unchanged except for the loss of the founder and secretary, Dr. W. L. Rodman, who died March 8, 1916: Surg.-Gen. W. C. Braisted, U. S. Navy, president; Dr. W. L. Rodman, secretary; Col. Louis A. La Garde, U. S. Army, retired, treasurer; Surg.-Gen. W. C. Gorgas, U. S. Army; Surg.-Gen. Rupert Blue, U. S. P. H. S.; Medical Director E. R. Stitt, U. S. Navy; Asst. Surg.-Gen. W. C. Rucker, U. S. P. H. S.; Dr. Herbert Harlan, Federation of State Medical Examining Boards; Dr. Isador Dyer, New Orleans; Dr. Victor C. Vaughan, Ann Arbor, Mich.; Dr. Henry Sewall, Denver; Dr. Louis B. Wilson, Rochester, Minn.; Dr. E. Wyllys Andrews, Chicago; Dr. Horace Arnold, Boston; and Dr. Austin Flint, New York. Announcement has been made that the first examination will be held at the Army Medical Museum, Washington, D. C., begin-

ning Oct. 16, 1916, and continuing for one week. Requirements for admission to the examination are: Satisfactory completion of (a) High school. A four-year high school course. (b) College. Two years of acceptable college work, including physics, chemistry, biology and a modern language. (c) Medical school. Graduation from a Class A medical school (American Medical Association classification). (d) Hospital training. One year as intern in an acceptable hospital or laboratory. These requirements apply to graduates of medical schools in 1912 and thereafter. The board may accept equivalent credentials in the case of graduates previous to 1912. The following subjects will be included: Anatomy, physiology, chemistry and physics, pathology and bacteriology, materia medica, pharmacology and therapeutics, medicine, surgery, obstetrics and gynecology, hygiene and sanitation and medical jurisprudence. An average of 75 per cent. must be secured for a passing grade. No fee is charged for the examination, but a registration fee of \$5 will be required. Candidates who have been successful in passing the examination and are approved by the board, will be granted certificates. This certificate, however, is not a license to practice medicine, nor does it exempt the holders thereof from complying with the legal requirements of the states in which they desire to practice; but it will be evidence of high attainment in medical knowledge; and will, the board believes, soon be accepted by the state boards as evidence of qualification for licensure. The National Board of Medical Examiners has been endorsed by the American Medical Association, the Council on Medical Education of the American Medical Association, the American Association of Military Surgeons, the American Roentgenological Association, Southwestern Medical Association, Mississippi Valley Medical Association, Southern Medical Association, Clinical Congress of Surgeons of North America, Western Surgical Association, St. Louis Medical Association, Milwaukee Surgical Association, Seaboard Medical Association, Harrisburg Academy of Medicine, etc., Southern Surgical and Gynecological Association, Southern Medical Association. Further information and application blanks may be obtained from the secretary, Dr. J. S. Rodman, 2106 Walnut Street, Philadelphia, Pa.

EDITORIAL NOTES**DEAR DOCTOR:**

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Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

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THE prohibitionists are making a movement to prevent the publication or circulation of liquor advertisements in "dry" territory. Will this movement take into consideration the advertising of various patent and proprietary medicines like Wine of Cardui, Hostetter's Bitters, Lydia Pinkham's Vegetable Compound, etc.?

DETAILED announcement was made in the June number of THE JOURNAL concerning the Military Training Camps to be held at Fort Benjamin Harrison, Indianapolis, during the summer months. However, on account of the Mexican trouble the camps have been abandoned, and the post used as a mobilization camp for the Organized Militia of Indiana.

Do not be led astray by the flowery talk of Reed & Carnrick's detail man, now working Indiana, who tells you that the Council on Pharmacy and Chemistry of the A. M. A. is considering the leading so-called physiologic preparations turned out by that firm. As a matter of fact, Peptenzyme, Protonuclein, Trophonine and Nephritine have been refused recognition by the Council on Pharmacy and Chemistry. A preparation that will not stand the investigation of the Council on Pharmacy and Chemistry is a good preparation for reputable physicians to steer clear of.

INDIANA physicians will be interested in the work of Dr. J. R. Eastman, prominent surgeon of Indianapolis, who left June 17 for service in the war zone of Europe. Dr. Eastman is to have charge of the Austrian units sent out by the American Physicians' Expeditionary Society, with headquarters at Vienna. These opportunities at the battle front offer a wide field of service for American physicians and surgeons, and, on the other hand, the broad experience of the work will be of inestimable value in furthering our knowledge of medical science and surgical technic.

THE September number of THE JOURNAL will be known as The Fort Wayne Number. It will contain the completed scientific program for the coming session of the Association, the reports of all standing committees, and such announcements concerning the coming session as are pertinent. Members of the Association are promised a session that is fully up to the standard set by previous sessions.

DR. GEORGE F. KEIPER, President of the Indiana State Medical Association, announces the following names on the Indiana Committee to Standardize First Aid to the Injured: Dr. George F. Beasley, LaFayette, Chairman; Dr. Miles F. Porter, Fort Wayne, Secretary; Dr. Leonard Ensminger, Indianapolis; Dr. Granville Reynard, Union City; Dr. A. J. MacDonald, Bedford; Dr. A. T. Knoefel, Terre Haute.

THE Wine of Cardui suit has ended in a judgment of 1 cent damages against the American Medical Association. As we understand it, the entire cost of the suit falls on the Wine of Cardui people, and in view of the fact that the total expense is reputed to be close to a half million dollars, it would seem that the Wine of Cardui people swallowed a rather bitter pill when they tackled the American Medical Association.

"GLANDO GARGLE" is a proprietary medicine largely advertised in the daily newspapers as a safe and reliable remedy for adenoids. Physicians often are asked by their patrons as to the value of "Glando Gargle," and the reply should be that any child suffering with adenoids should have an operation as the surest and safest means of obtaining relief. Aside from this, no patient is justified in using a remedy of unknown composition advertised in newspapers.

THE *Modern Hospital* is authority for the statement that solid gold hypodermic needles are cheapest in the long run and take the place of platinum needles which are more expensive and offer the further objection that their points will not stay sharp for any considerable length of time. The 14 K gold needles are reported to have practically the rigidity of steel without the danger of breaking that is always present in tempered steel needles, and the manufacturers claim that the gold needles are impervious to rust or corrosion of any kind. The needles may be sterilized by steaming, boiling, or by any antiseptic solution ordinarily used for sterilizing.

THE Indiana Pharmaceutical Association, in annual convention at Indianapolis the latter part of June, again brought up for discussion the time-worn subject of the enforcement of the Indiana pure food and drug law as regards inspection of physicians' supplies. Again, as in previous years, they adopted a resolution requesting Secretary J. N. Hurty and State Commissioner H. E. Barnard to come to the meeting and "explain why the pure food and drug laws were not enforced against all classes alike;" and again it was explained to them, as it has been every year for the past nine years, that the pure food and drug law contains a provision that says that it shall not apply to medical prescriptions of regularly licensed physicians, and the opinion from the Attorney-General's office holds that when a physician gives medicines to a patient it is a medical prescription such as is covered by the exemption clause. The druggists either are very slow in grasping this situation, or they wilfully ignore this exemption clause.

THE Mexican situation has demonstrated the unpreparedness of the United States for trouble of any magnitude. Not the least of our unpreparedness is the inadequate medical and surgical service. This general unpreparedness is not due to any laxity on the part of the various army and navy departments of the government, but to the almost criminal negligence and parsimony of the government in not making appropriate provisions for war in case we are drawn into it. However, a commendable spirit has been exhibited by the medical profession as a whole in offering the highest type of service in time of trouble, and it remains to be seen if the government will put forth an effort to make such service as efficient as it should be. It takes money as well as brains to establish efficiency, and our government, fairly reeking in wealth, has shown an indifference to the demands occasioned by the troublesome times that is amazing. Probably a very severe shock is all that will cause the American people to awake to the real conditions and force their representatives in Congress to provide adequately for the national defense.

DEATHS

RICHARD W. SIPE, M.D., Orange, died July 1, aged 76 years.

JOHN T. WHITE, M.D., Grandview, died June 10, aged 73 years.

C. H. GILBERT, M.D., aged 59 years, died June 11 at his home in Rushville.

ALLEN MOORE, M.D., died at his home in North Liberty, June 14, aged 70 years.

ETTA C. MILLER, widow of the late Dr. George Miller of Anderson, died June 2.

MARY H. BANKER, wife of Dr. A. J. Banker, Indianapolis, died June 29, aged 62 years.

SARAH E. EMSWILER, widow of Dr. John H. Emswiler of Peru, died June 21, aged 82 years.

FRANK H. FOSTER, M.D., New Carlisle, was killed by an interurban car June 4; aged 46 years.

IRA T. SAGE, M.D., formerly practicing physician at Redkey, died May 26 at Muncie, aged 80 years.

AMOS W. PATTERSON, M.D., died at his home in Indianapolis June 26, aged 76 years. Dr. Patterson was a graduate of the Ohio State Medical College, 1866.

LYNN WILSON, son of Dr. and Mrs. Dalton Wilson of Yankeetown, died May 15, aged thirteen years, after a six months illness from an osteo-sarcoma of femur with metastases to lungs.

GERALDINE STOUT, 10 year old daughter of Dr. Trent Stout, Upland, was instantly killed on May 28 by a bucket of corn hurled by an angered pedestrian at the occupants of the automobile in which she was riding.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

INDIANAPOLIS

DR. E. D. WALES went East for the annual reunion of his Harvard Medical Class.

DR. JOHN KYLE of Los Angeles was a guest of Indianapolis friends for several days prior to the Detroit meeting.

FIRST LIEUT. HAROLD NIMAL, of the Hospital Corps, Co. 1, I. N. G., was married on June 23 to Mrs. Goldie Fogle.

DR. PAUL F. MARTIN will leave soon to take charge of an independent American hospital corps in Austria.

At a recent meeting of the Indianapolis Historical Society, Dr. S. E. Earp was elected president, and Dr. Eugene Buehler, vice-president.

DR. and MRS R. E. REPASS and son are taking an extended motor trip through the East. Dr. Repass will take some post-graduate work in Boston before returning home.

A TOURING car owned and driven by Dr. F. C. Heath was demolished by a Big Four passenger train near Beech Grove June 25. When the machine became stalled on the track, Dr. Heath saw the approaching train and jumped from the automobile, thus escaping personal injury.

COMPULSORY typhoid and smallpox vaccination of the men drafted from the state to the federal service has made heavy demands on the medical department of the army service.

DR. EARLY of Rushville, formerly of Ely, Nev., where he was chief surgeon in charge of the hospitals of the copper mines, has resigned his position. While taking a vacation he is looking over the field with a view to a new location.

DR. G. B. JACKSON was re-elected president of the City Health Board at the annual meeting in June. Dr. Thomas B. Eastman was renamed vice-president, and Dr. H. G. Morgan continues as secretary. Dr. Morgan was chosen delegate to the annual meeting of the A. M. A.

MR. J. K. LILLY, president of Eli Lilly & Company, was entertained with a dinner at the University Club June 9 in commemoration of his fortieth anniversary with the firm, and the eighteenth anniversary of his presidency. Thirty-five members of the firm attended the banquet.

ROBERT E. NEFF, registrar of the Indiana University School of Medicine for a number of years and head of the administrative department of the Robert W. Long Hospital, was married June 16 to Miss Grace Clark, Albion, Ill., a 1916 graduate of Indiana University. The wedding took place at Bloomington.

A NUMBER of Indianapolis physicians, as a result of membership in the Indiana National Guard, have been called to service following mobilization orders. Maj. L. D. Carter and

Foxworthy, Lieuts. Emhart and Nimal of the guard and Drs. Keene, Clark and Pfaff of the medical reserve of the Regular Army are in active service at Fort Benjamin Harrison.

DR. J. R. EASTMAN, Indianapolis, sailed for Austria on June 17 where he will spend the next six months in charge of the Austrian units sent out by the American Physicians' Expeditionary Society. His headquarters will be at Vienna. He was accompanied by Mrs. Eastman and Joseph R. Eastman, Jr. Dr. Eastman's Hospital will be conducted in his absence by his brother, Dr. Thomas B. Eastman.

SINCE the appointment of the Accounts Review Committee by the Indianapolis Medical Society some three months ago, this committee has been asked to review but one disputed account. This would seem to indicate that there are no disputed accounts among members with insurance companies operating under the W. C. L. or the members have other and in their judgment better methods of adjustments.

THE Deaconess Hospital, located at Capitol Avenue and Ohio Street, is just completing some extensive improvements. With the object of expediting nursing and intern service to the patient, the management has installed an electric call system with a central exchange in the main office, which supplants entirely the use of the house telephone in communicating with interns. By the use of colored lights placed in conspicuous locations in the corridors and intern quarters, any intern can be signaled to the floor where his services are desired. Each room is likewise provided with a signal which throws a light at the door and starts a buzzer on the floor and in the main office, which enables the office to act as a control for floor calls of patients for nurses. The buzzer can only be released by the nurse in the patient's room, indicating to the main office that the call has been answered. Under this system 1,000 patients' calls averaged thirty-five seconds; that is, thirty-five seconds elapsed from the time the buzzer signal began in the office indicating the patient desired attention, until the buzzer was released indicating a nurse was in the room. All rooms have been provided with a new lighting system, consisting of large double blown glass globes, which absorb 14 per cent. of the light rays, but give a soft, equally diffused light. There have been expended \$4,800 in these improvements, including redecorating the walls of the entire hospital. In order to give the Hospital Training

School proper standing with the regent of the Rockefeller Foundation, which requires an average of six obstetrical cases for every nurse, a charity ward has been established. Salaried senior and junior house physician service has been adopted. Dr. Guedel is superintendent, Dr. McElroy house physician senior, Dr. Spitler house physician junior, and Messrs. Huffman and Craig externs.

GENERAL

DR. C. R. PRICE and family, Geneva, spent their vacation at Pamplin, Va.

DR. C. G. HARROD, Burney, was married June 7 to Mrs. Mollie Wasson.

DR. GRANT GOODWIN, Monticello, underwent an operation for hernia, June 26.

THE cornerstone of Bartholomew county's new hospital was laid June 12.

DR. ALBERT DAVIS of Marion is doing special work at the Mayo Clinics, Rochester.

DR. H. B. SHOUP, Zanesville, spent the first ten days of July at the Mayo Clinics, Rochester.

DR. AND MRS. W. B. KREIDER, Goshen, are in the East, where the doctor is attending clinics.

BORN to Dr. and Mrs. Wm. J. Mellinger, Flora, on July 3, a girl, Margaret Ellen, weight 8 lbs.

DR. ARTHUR M. SULLIVAN, Attica, was married June 27 to Miss Helen L. Jennings, also of Attica.

DR. C. W. FRINK, Elkhart, has returned from New York City, where he visited hospitals and clinics.

DR. M. F. WEDDING, Cannelton, has been appointed county poor physician and jail physician.

DR. E. O. DANIELS of Marion is taking postgraduate work at the Johns Hopkins Hospital, Baltimore.

DR. and MRS. HENRY W. SCHROCK, LaGrange, are taking an extended trip through the East.

DR. JOHN S. MORRISON, LaFayette, who has been spending a month at Harvard Medical College and the Boston hospitals, has returned home.

DR. C. C. RAYL, Monroe, has installed in his office one of the latest designs of Roentgen-ray machines.

KNEIPP Sanitarium at Rome City will be improved and enlarged at a cost of from \$80,000 to \$100,000.

ANNOUNCEMENT is made that the Yale Medical School it to be opened to a limited number of women students.

DR. A. E. BURKHARDT, Tipton, has been attending clinics in Chicago and at the Mayo Clinic, Rochester.

THE marriage of Dr. William A. Johnson, Perrysville, to Miss Nelle Shute took place at Perrysville, June 28.

DR. and MRS. W. A. GANTE, of Anderson, are spending the month of July motoring through Wisconsin and Minnesota.

DR. AND MRS. MILO GIBBS, Greenfield, have returned from a vacation spent in Chicago, Milwaukee, Springfield and St. Louis.

DR. GEORGE W. ANGLIN, Warsaw, has been taking special work in diagnosis at Johns Hopkins University at Baltimore.

DR. R. E. TROUTMAN and Dr. James J. Stanton, Logansport, were injured June 2 when their automobile skidded and turned over.

DR. ALBERT E. BULSON, JR., and daughter, Miss Geraldine, of Fort Wayne, are spending a part of July in Canada, fishing.

DR. E. R. CHURCHELL, Richmond, has returned from a month's hunting trip in the mountains of southwestern Montana.

DR. JOSHUA M. GORDON, South Bend, is taking a month's postgraduate work at Harvard Graduate School of Medicine, Boston.

LUTHER BOYERS, son of Dr. and Mrs. J. S. Boyers, Decatur, graduated in medicine from the Leland Stanford University, May 22.

DR. A. O. TRUELOVE, formerly of Indianapolis, has located at Warsaw to be associated with the local physicians' organization of that city.

DR. and MRS. G. F. BUTLER of Mudlavia are spending their vacation motoring through the East. They will be gone a month or more.

DR. WILLIAM MOORE, Summitville, sailed May 31 for Vienna, Austria, to serve in a military base hospital maintained by the Austrian government.

DR. WEIR MILEY and family, Anderson, will spend the summer in the East. Dr. Miley will spend six weeks at Harvard, taking the summer medical course.

DR. AND MRS. M. T. JAY and son James attended the Alumni reception of Ohio State Medical School at Cincinnati in June, and on their return home spent some little time in Covington, Ky.

DR. E. H. ANDREWS and family have returned from a motor trip in Kentucky. Dr. Andrews attended clinics at the Louisville Medical College while in Kentucky.

DR. AND MRS. D. V. McCLARY, Dale, attended the meeting of the Association of Surgeons of the Southern Railway which convened at Chattanooga, June 6 to 8.

DR. JOSEPH MAURER, Marion, has returned from New York, where he has been attending clinics at the New York Post-Graduate Medical School and Hospital.

DR. HARRY W. HELMEN, South Bend, was married, June 7, to Miss Norma Trayler of Indianapolis. They are at home at 1120 Allen Street, South Bend, Ind.

DR. FRANK B. THOMPSON, LaFayette, and Miss Dollie Fenton Frazier were married June 19 at Cincinnati. They spent two weeks in the East before returning to LaFayette.

DRS. JAMES WILSON, G. M. LaSalle and Fred M. Whisler, Wabash, have formed a medical partnership, and are located in new office rooms at the corner of Hill and Wabash Streets.

MARION has just completed an enthusiastic campaign for raising funds for a new city hospital. As a result of six days' effort, \$17,072.96 were realized, \$2,072.96 more than their aim.

THE sixty-ninth semi-annual meeting of the Aesculapian Society of Wabash Valley was held in Terre Haute the latter part of May. Over three hundred physicians were in attendance. The annual meeting of the Society will be held at Paris, Ill., in October.

DR. PAUL E. BOWERS, physician in charge of the Indiana State Prison, and First Lieut. M. R. C., U. S. Army, left June 25 for duty at Fort Sam Houston, Tex., where he is serving in Ambulance Co. 6.

DR. PERRY WOOLERY and family, Heltonville, have been taking an extended vacation trip through the East, visiting New York, some of the Atlantic Coast watering places, Niagara Falls, Canada, etc.

THE Crescent Sanitarium at Evansville is erecting a large addition to its building. The new part, in addition to private rooms with connecting bath, will contain lecture and dining rooms for the nurses.

DR. CHAS. P. EMERSON, dean of the Indiana University School of Medicine at Indianapolis, addressed the 1916 class of the General Hospital's Training School for Nurses at Elkhart. Five nurses received diplomas.

DR. G. R. DOUGLAS and wife, Valparaiso, have been taking a vacation trip through the East, including Washington, New York, Philadelphia, Boston, and returned by way of Detroit, to attend the annual session of the A. M. A.

DR. CLAY A. BALL, Muncie, was married June 24 to Miss Helen Mauck of Burton, Ohio. They left immediately for an extended trip through the East. After August 21 Dr. and Mrs. Ball will be at home at 303 West Adams Street, Muncie.

DR. SAMUEL E. SMITH, superintendent of the Eastern Indiana Hospital for the Insane at Richmond, has been elected alumni trustee of Indiana University. He succeeds Judge Joseph H. Shea, who resigned when he became ambassador to Chili.

DR. D. S. WIGGINS, New Castle, is spending some time in New York attending clinics and assisting Dr. John Erdman at the Erdman private hospital. On his return he will be connected with the New Castle physicians who have associated themselves in a clinic.

THE DeKalb County Medical Society held a very pleasant and profitable meeting at Butler the latter part of May. The meeting closed with a banquet at the Hotel Butler at which Dr. Wm. F. Shumaker, president of the Society, presided as toastmaster. Dr. E. E. Morgan, Councilor, of Fort Wayne, was a guest.

THE property known as the Fayette Sanitarium at Connersville has been given to Fayette County for a public hospital, it being stipulated that the citizens of Fayette County raise an additional \$36,000 to complete the enterprise and equip the hospital. The property is valued at \$12,000.

DR. J. P. SIMONDS, recently superintendent of the Hygienic Laboratory of the Indiana State Board of Health, is now on the staff of the Rockefeller Institute for Medical Research. His first work will be to study wound infection in France. He has been assigned to the hospital at Compiegne, of which hospital Dr. Alexo Carrel is superintendent.

DURING June the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies: Abbott Laboratories—Galactenzyme Tablets, Galactenzyme Bouillon. Schlesinger Radium Co.—Radium Bromide, Radium Carbonate, Radium Chloride, Radium Sulphate. Vitalait Laboratories — Vitalait Starter.

THE Nebraska State Medical Association, at its May meeting in Omaha, decided to print a publication to be known as the *Nebraska State Medical Journal*. The first issue will appear this month. Dr. Irving S. Cutter of Omaha will be the editor, and Dr. Joseph M. Aikin, secretary of the association, will be the business manager. This new journal will conform to the standards of the Council on Pharmacy and Chemistry, and makes the twenty-eighth state-owned journal (all there are except Illinois) which now upholds this standard.

ANNOUNCEMENT is made that the Victor Electric Corporation is a new corporation, with an authorized capital of \$2,500,000, organized to continue the business of the following firms who have sold their properties and interests to said corporations: Victor Electric Company, Chicago and New York; Scheidel-Western X-Ray Company, Chicago and New York; Macalaster, Wiggin Company, Cambridge, Mass., Chicago and New York; and Snook-Roentgen Manufacturing Company, Philadelphia and New York.

THE Rockefeller Foundation will establish its School of Hygiene and Public Health in Baltimore in connection with the Johns Hopkins University. Dr. William H. Welch, Baltimore, the

eminent pathologist, will be director of the school, and Dr. William H. Howell of Johns Hopkins, head of the physiologic section. It is proposed to erect a building as one of the Johns Hopkins Hospital group, which will cost about \$200,000, and the running expenses of the institution are expected to be about \$75,000 a year at the outset. The school probably will be opened in October, 1917.

ON account of the precarious condition of affairs on our southern border, the sanitary training camps planned at Fort Benjamin Harrison, Indianapolis, from July 5 to September 5, have been abandoned and the post will be used as a mobilization camp for the Organized Militia of Indiana. Field Hospital No. 1, U. S. Army, under command of Maj. William W. Reno, M. C., U. S. Army, and Ambulance Company No. 1, under command of Capt. Condon C. McCormack, M. C., U. S. Army, which has been ordered to Fort Benjamin Harrison for duty during these camps, have been diverted and are waiting orders for the Southern frontier.—*Jour. A. M. A.*

THE Physicians' Radium Association of Chicago (Inc.) is an association formed and financed by some of the representative physicians of Chicago for the purpose of purchasing a large amount of radium, in applicators of various strengths and shapes, for the benefit of the profession in this section of the Middle West. The radium will be rented to the profession at so much per milligram hour. Treatment rooms are available at the association office, and a nominal fee charged to physicians desiring to bring patients to the office for treatment. The association also has established a library, where all literature pertaining to radium therapy can be procured.

THE officers of the Medical Corps, Indiana National Guard, have been assigned and reassigned as follows: Field Hospital, Co. No. 1: Maj. Larue D. Carter, commanding, Indianapolis; Capt. John W. Emhardt, Indianapolis; First Lieut. Simon Reisler, Indianapolis; First Lieut. Harold Nimal, Indianapolis; First Lieut. Clifford Sourwine, Brazil. Ambulance Co. No. 1: Capt. A. G. Chittick, commanding, Frankfort; Capt. James W. Hadley, Frankfort; First Lieut. Arett C. Arnett, LaFayette; First Lieut. Don C. McClelland, LaFayette; First Lieut. Cecil Johnson, Rensselaer. Regimental Infirmary,

Third Infantry: Maj. Frank B. Humphreys, commanding, Angola; Capt. George W. Twomey, New Albany; First Lieut. Leonard Ostrowski, Indiana Harbor; First Lieut. Butron Thompson, Kokomo. Regimental Infirmary, Second Infantry; Maj. Earl S. Green, commanding, Muncie; Capt. George F. Holland, Bloomington; First Lieut. Edwin C. Kyte, Seymour; First Lieut. Michael O. Devaney, Indianapolis. Regimental Infirmary, First Provisional Regiment: Maj. Frank W. Foxworthy, commanding, Indianapolis; Capt. N. Austin Carey, Crawfordsville; First Lieut. R. H. Richards, Patricksburg; First Lieut. Leonard Collins, Winimac. Artillery Battalion: Capt. F. C. Robinson, Martinsville.

SOCIETY PROCEEDINGS

INDIANAPOLIS MEDICAL SOCIETY

Meeting of May 16

The meeting was called to order by the president at 8:15 p. m. The minutes of the previous meeting were read and approved. The secretary read a letter from the Indiana State Dental Association inviting the members of the medical society to hear a paper by Dr. H. R. Raper on "Bad Root-Canal Work—What Shall We Do About It?" The secretary also read a card from the family of Dr. A. O. Ward, acknowledging the expression of sympathy from the Indianapolis Medical Society.

PROGRAM

Paper: "Excesses and Irregularities of Fusion Between the Mesentery of the Embryonal Colon and the Parietal Peritoneum," by Dr. J. R. Eastman.

Deforming lesions of the large intestine and terminal ileum occur with notable common incidence at one or more of a few definite locations, to wit—about the sigmoid, about the caudad ileum, at the hepatic flexure and at the splenic angle. The search for irregular and excessive fusions and deforming bands in these areas should form a part of all abdominal operations on all patients in whose symptom complex, intestinal stagnation is a factor.

The descending colon of the embryo which on account of the width of its mesentery is at first freely movable lies well over to the left side of the abdominal cavity, and in consequence the left layer of its mesentery lies in contact with the parietal layer of the peritoneum. Subsequently fusion of these two peritoneal layers takes place. The fusion begins near the median line, that is near the root of the mesentery and extends outward. The fused layers eventually become converted into loose connective tissue. Thus, this portion of the colon loses its mesentery and becomes fixed to the abdominal wall.

This fusion extends usually in the caudad direction as far as the medial border of the left psoas muscle and takes place to a variable extent in the iliac fossa.

Owing to the irregularities in the fusion of the mesocolon descends to the mural peritoneum, transverse folds or septa are developed and small paracolic fossae are formed. At the lowest level of normal fusion, that is, at the proximal or cephalad end of the sigmoid, a distinct band marking the edge or lower border of the fusion, tethers the sigmoid to the abdominal wall. This band-like margin is the *linia terminalis* which stands out conspicuously when the sigmoid is drawn ventrally giving added depth to the *recessus intersigmoideus*. As the sigmoid mesocolon does not as a rule fuse with the parietal peritoneum but remains freely movable, it is readily seen that acute angulation may occur at this level as it does at other fixed points of flexure or angulation as at the hepatic flexure or splenic angle. If normal embryologic fusion of the two peritoneal surfaces in this region is excessive, that is, if the fusion extends so far laterally as to obliterate the space between the mural peritoneum and the tunica serosa of the distal descending colon and proximal sigmoid, fixing the gut itself to the abdominal wall, such excessive fusion may well be looked on as a predisposing factor in stagnation in this as in other segments of the colon.

A similar fusion of the outer lamina of what is at first a free and loose mesentery of the ascending colon with the contiguous mural peritoneum also takes place on the right side.

There is another important embryologic factor in the etiology of sigmoidal stagnation, this being the persistence in the fetal and postnatal abdomen of the fold of peritoneum extending from the direction of the internal abdominal ring. This persisting fold takes the same course as the *plica-vascularis* of the descending testis or ovary. There is perhaps sufficient reason to believe that the postnatal fold on the right side of the abdomen extending from the mesentery of the terminal ileum to the genital gland which has been called the *ileopelvic band* by Lane and which in the female may by traction on the appendix be drawn up as the *appendiculo-ovarian ligament* is but a remnant of the very conspicuous fetal fold of peritoneum which is drawn out by traction of the inguinal ligament on the descending genital gland, the inguinal ligament becoming in the male the *gubernaculum testis* and in the female the *round ligament*.

Fusion in embryo of the mesenteries of the ileum and cecum with the folds just mentioned and downward traction of the descending genital gland may be suspected fairly of producing displacements and deformities of the terminal ileum and cecum.

Paper: "The Etiology and Treatment of Amenorrhea and Allied Disturbances, With Special Reference to the Internal Secretions," Dr. John W. Sluss.

The ovary is a double organ composed of (1) The interstitial glands which by their hormones influence body growth and especially determine the secondary sex characters; (2) The corpus luteum which consists of the oocyte and its epithelial sac, active organs of internal secretions.

Between the ages of 10 and 14, under the influence of the thyroid and thymus ovulation begins which implies functioning of the corpus luteum, chief activator of the uterus.

Menstruation is a byproduct of ovulation and the etiology of most of its derangements must be sought in Endocrinal relationships.

Likewise, many constitutional conditions in which menstrual disturbance is a prominent character are the results of faulty action of some of the glands of internal secretion; for example, chlorosis, infantilism and the menopause, all of which are shown to bear definite relationships of cause and effect to the ovarian and other secretions.

The interchange between the glands themselves on the one hand, and them and the tissues on the other is through the medium of hormones which we may regard as chemical agents of more or less definite composition. These agents enter into combinations with the molecules of the protoplasm of the cell and thus modify the functions of the cell.

The hormones which apparently have the greatest influence on cellular metabolism and are therefore most potent to affect growth are probably of a pipoid character.

Lipoids are phosphorus and nitrogen-bearing compounds resembling fat physically but quite dissimilar chemically. They constitute a large part of the cell, in the brain and spinal cord reaching 68 per cent. The relation of lipid mobility to certain physiological hyperactivities are noteworthy.

A number of lipoids are found in the ovary, extracted from the dried organ by various solvents, alcohol, benzene, etc. One of these Iscovesco has found to be a specific utero excitant and has proven it to be a definite determinant of uterine development.

It is of value in chlorosis by reason of its power to check hemolysis, to prevent loss of hemoglobin by the red corpuscle.

Of value in that form of infantilism characterized by congenital antelexion, etc.; of value in the menopause, establishing new and stable relationships between the endocrinous glands; and in the other constitutional aberrations of genital origins. This particular lipid, Iscovesco calls gynocrinal. It is administered hypodermically, the dosage depending on the syndrome.

DISCUSSION

DR. GATCH: Dr. Eastman's paper shows the value of embryological study in an effort to explain these conditions; avascular folds or membranes are congenital; vascular folds are inflammatory; it is best to postpone operations on vascular folds, allowing them to become avascular; in operation be conservative; use gauze dissection to wipe membranes away if possible; if there is any hypertrophy above the membrane it is best to remove the fold; if only angulation allow fold to remain. There is a great variance in the theories of menstruation. Foremost authorities differ widely in their views. In 1903 Frankel demonstrated that the corpus luteum was the absolute essential for menstruation. Lipoid apparently comes from the ovarian connective tissue or stroma, because lipid is the extract from the whole ovary.

DR. LINK: Dr. Eastman's original work has called the attention of the surgeons to the bands described and the way to correct the same. What are the indications for the removal of these bands? Hypertrophy is rare and therefore no indication. Any light cast on the symptom of amenorrhea will be most welcome. Cases are very difficult to handle. "Hypo" conditions have never been well treated; "hyper" conditions are easier to treat.

DR. TURNER: The field of the glands of internal secretion is very dark and the actions of these internal secretions are not definitely known. Unfortunately the pituitrin on the market is from the posterior part of the hypophysis with only a small part of the pars intermedia. A definite knowledge of the integral parts of the lipoids is questionable. Lecithin, for example, was recently found to be entirely different from our former conceptions.

DR. EASTMAN (in closing): Replying to Dr. Gatch it is not remote to say that no doubt at times a division of these folds or membranes would be to some purpose. At the proximal sigmoid one may safely gauze dissect a fold relieving angulation and therefore stasis in the descending colon.

DR. SLUSS (in closing): I believe we have been giving too much attention to the pathology and not enough to the physiology of the pelvis.

Attendance, 75.

Meeting adjourned.

MUNCIE ACADEMY OF MEDICINE

Meeting of June 9, 1916

Regular meeting of Muncie Academy of Medicine was held in Y. M. C. A. Building, Friday evening, June 9, and was called to order at 8:15 by E. S. Green.

C. M. Mix displayed to the Academy members a collection of obstetric forceps of all sizes, types and ages, explaining their history, individual uses and points of superiority; and discoursed on their misuse or abuse: Statistics from the Sloan Maternity Hospital indicates use of forceps in 12.3 per cent. of deliveries. The same obstetricians in private practice use forceps in 22.6 per cent. of cases. Indications for forceps are insufficient progress due to (1) disproportion between passage and passenger; (2) malposition; (3) exhaustion from attempts to dilate a rigid os, and (4) inertia. It is very important that malpresentations, such as occipito-posterior, be diagnosed early. Contraindications are (1) such disproportion as to render delivery impossible; (2) malpresentation, making delivery hazardous; (3) undilated cervix. Maternal dangers from use of forceps are (1) lacerations; (2) fractures of pelvis, and (3) sloughing of soft parts due to pressure or traumatism. Laceration are due to (1) forceps improperly applied, damaging floor; (2) sudden slipping, and (3) rapid extraction of head. Fractures are nearly always due to brute force. Traction on forceps applied to a head presenting mento-anterior, should be downward till chin emerges from beneath symphysis, then forward and upward. In persistent mento-posterior, rotation is necessary.

The discussion which followed showed that there is a wide difference in the habits of physicians in the same community regarding the use of forceps. The estimate of one practitioner was only 3 per cent. while the other extreme was approximately 15 to 18 per cent.

The consensus was that skill and familiarity of the obstetrician with his instrument was of more importance to the patient than the particular style or make of forceps. A dextrous operator with a poor forceps will do better work than one who is unfamiliar with the technic even though he has the most suitable instrument made. Axis traction is correct in principle.

Adjourned.

Meeting of June 16

C. A. Ball introduced a boy of 5, weighing less than 30 pounds. In early childhood he had both scarlet fever and diphtheria after which he never fully regained health and strength. When Dr. Ball saw him three weeks previously the S. G. of the urine was 1035 and contained considerable sugar. Repeated attempts at forty-eight-hour fasting promptly lowered the gravity to 1020 and but a trace, if any, sugar remains. The boy is now on a restricted diet and is improving.

J. C. Quick gave a report of his visit to the Mayo Clinic, telling particularly of the advance made in surgery and treatment of diseases and organs of the upper abdomen.

D. M. Green read a paper on "Puerperal Eclampsia," saying: Actual eclampsia occurs about once in every 100 pregnancies. Although the onset is rapid, eclamptic convulsions seldom appear without warning. The absence of albumin or casts does not preclude the possibility of development of eclampsia. The persistence of a systolic blood pressure of 160 mm. or more is always a danger signal. Those eclampsias which develop after delivery are marked usually by numerous convulsions in rapid succession ended by death. After effects of eclampsia include mental derangements, visual disturbances, marked jaundice, and other evidences common to intense toxemia. A few cases may show traces of albuminuria for weeks. Autopsy seldom shows kidney change other than a mild degenerative nephritis, indicating that high grade albuminuria does not necessarily mean great kidney change. Prognosis averages 20 to 25 per cent. maternal mortality, 33 to 50 per cent. for fetus. Prophylactic treatment during pregnancy is of utmost importance. If normal metabolic process is to be maintained, strict attention must be given to various hygienic measures, including elimination through the various channels—not diuretics, but the dilution of the urine by the free use of water, which also renders the urine less irritating to the renal filter. Rest for the kidneys by elimination through other channels should be the rule. The development of an acidosis is one of the most potent provocations of the eclamptic condition, and should be combated vigorously by elimination, regulation of diet and alkaline treatments wherever found. Medicinal treatment includes sedatives by mouth where possible of administration, and veratrum viride is recommended. Surgical measures include venesection, which should be free, any untoward effects being offset by simultaneous intravenous injection of salt solution. Weak pulse is said to be not necessarily a contraindication. One of the reasons for the relief following delivery is undoubtedly the free bleeding which follows. Emptying of the uterus needs little discussion in the face of the known beneficial results. It should always be considered.

The paper was generally discussed, most of the speakers asserting that they were seeing fewer cases of eclampsia than formerly, due, no doubt, to the fact that the pregnant women were keeping closer in touch with their obstetrician, and the profound toxemias were being prevented.

H. D. Fair and C. E. Sellars believe it inadvisable to administer chloroform to an eclamptic patient as it tends to increase the burden of an already overtaxed body.

Adjourned.

H. D. FAIR, Secretary.

DELAWARE COUNTY

Meeting of June 2

The Delaware County Medical Society met in regular session at the Muncie Y. M. C. A. Building on Friday evening, June 2, 1916, and was called to order at 8:15 by President C. A. Ball.

George R. Andrews read an exceedingly pertinent paper on his surgical experience of the past decade, entitled, "Some Observations and Deductions," saying: "It has apparently been believed by a class of doctors that in order to establish or hold prestige it was necessary to impress the sick or members of the family by a spectacular first visit diagnosis. It is more important for both internist and surgeon to be able to accurately decide whether or not they are dealing with a surgical condition, as the details are chiefly of value only in selecting the most suitable incision, and exploratory operations do not now demand an apology. The simplest incision to the field, the simplest handling of the focal areas, and simple drainage are chosen. The simple incision is one that satisfactorily exposes the field with the least damage to fascia, muscle and nerves. The careful walling off of all but the immediate field of manipulation by moist pads, not so much as was formerly believed to prevent soiling, but to lessen the amount of trauma done structures which must combat the infection. All of our deaths following operation for appendicitis have occurred in perforated cases with a general diffused peritonitis at time of operation. A point worthy of note, because it must apply to all surgical dressings, is the fact that drainage wounds have healed, on an average, a week sooner since we have stopped all attempts at irrigating and wet cleanings. A few points that our experience and statistics seem to emphasize are: That the leukocyte count is the most valuable element in separating those demanding immediate operation from the ones you may wait with safety. That palliation is as a rule only procrastination and that procrastination increases morbidity and invites disaster. That the time of election is as soon as it is established that you have a surgical case, with few exceptions. The sudden cessation of pain is an important symptom and as a rule immediate operation is the only safe course to pursue. The early removal of drains and simple changing of dressings is not only safe but greatly shortens convalescence. That the mortality of appendicitis with early operation is less than in measles. I have always been in the conservation ranks and always try to preserve some glandular tissue, if only a fringe on the ovarian ligament, and our experience has been that the reoperation bugbear in these cases is a fallacy, which on the other hand in some cases where it was impossible to conserve some ovarian tissue the symptoms of the precipitate and premature menopause have been sufficiently distressing to fully warrant the slight hazard of a possible future operation. Cesarean section in a case which has not been made unfit for laparotomy with opening of the uterus, by careless or extensive attempts at delivery, is not a formidable operation and is a safer procedure for the mother in most cases than applying forceps over a head that won't engage with active pains. A good point to keep in mind is that practically all Cesarean babies must be resuscitated and even then not abandoned because they are

apparently breathing all right. When a patient is found with a severe acute pain in the abdomen with vomiting or nausea and any degree of abdominal muscular rigidity, and without diarrhea, active purgatives should not be given and a surgeon should be consulted. I have been greatly impressed with the value of the stereoscopic Roentgen-ray plates both as showing the most practical manipulation for the simple reduction of fractures and the impracticability of attempting it in those requiring open surgical means. The extreme efforts and difficulties presented by some of these with the fragments exposed for adjustment certainly show how futile any efforts at blind manipulation would have been."

B. R. Kirklin, representing the laboratories of the Home Hospital, exhibited several series of stereoscopic Roentgen plates demonstrating the great advantage of the Roentgen ray in diagnosis in very many conditions other than traumatism and accidental injuries. In numerous instances of both benign and malignant pathology the modern radiograph taken in connection with the history and clinical findings clears up a diagnosis that formerly could be verified only by autopsy or an exploratory incision. Dr. Kirklin also explained the dangers, to both patient and operator, that accompany the reckless use of Roentgen rays. One of the disadvantages of this form of treatment is the slow results. The patient is likely to become impatient and may quit taking the only treatment that can do him any good.

Adjourned.

H. D. FAIR, Secretary.

DUBOIS COUNTY

The Dubois County Medical Society met in regular session at the courthouse in Jasper, Tuesday afternoon, June 20. President Kelso called the meeting to order.

The minutes of the previous meeting were read and approved.

It was decided that each member be assessed 75 cents to defray the expenses of the district meeting. A letter from Dr. Arthur Strawson in which he offered the assistance of the Indiana Society for the Prevention of Tuberculosis in conducting a tuberculosis clinic. No action was taken. It was decided that in the future the members would read papers in their alphabetical rotation.

For the July meeting there will be papers by Doctors Bigham and Baker.

The meeting was adjourned after a discussion of cases.

The next meeting will be at Huntingburg, July 18.

Adjourned.

H. M. BAKER, Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1916, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

ENTERIC COATED GLYCOTAURO TABLETS.—Each tablet contains glycotauro 2 grains and is coated with salol. Hynson, Westcott and Co., Baltimore, Md.

PETROAGAR.—Each 100 gm. contains petrolatum 0.72 gm., agar 0.22 gm. with powdered licorice, cocoa and oil of anise sufficient to flavor. H. C. Merker Co., Chicago, Ill.

PETROBRAN.—Each 100 gm. contains petrolatum 0.74 gm., bran 0.22 gm. with powdered licorice and "oil of pineapple" (ethyl butyrate) sufficient to flavor. H. C. Merker Co., Chicago, Ill. (*Jour. A. M. A.*, June 10, 1916, p. 1857).

PROPAGANDA FOR REFORM

VACCINE TREATMENT.—Hektoen (*Jour. A. M. A.*, May 20, 1916, p. 1591) traces the stages by which vaccines, which were first employed with attempted scientific control, have come into indiscriminate and unrestrained use, with no guide beyond the statements which commercial vaccine makers are pleased to furnish with their wares. Already most physicians are realizing that the many claims made for vaccines are not borne out by facts, and that judging from practical results there is something fundamentally wrong with the method as at present so widely practiced. As clearly shown by Hektoen, "the simple fact is that we have no reliable evidence to show that vaccines, as used commonly, have the uniformly prompt and specific curative effects proclaimed by optimistic enthusiasts and especially by certain vaccine makers, who manifestly have not been safe guides to the principles of successful and rational therapeutics" (*Jour. A. M. A.*, May 20, 1916, p. 1625).

ENGLISH PRESCRIPTIONS.—Bernard Fantus, professor of pharmacology and therapeutics, University of Illinois School of Medicine, favors the abandonment of the so-called "Latin" prescription. He holds that the usual arguments in favor of the "Latin" prescription are fallacious and points out the advantages of the use of English. He concludes: "By far the most important reason for writing prescriptions in English lies in the difficulty medical students have in learning the Latin form. To the student prescription writing is a bugbear. When one thinks of the crowded medical curriculum and the comparatively small number of hours set aside for pharmacology and therapeutics, it seems a pity to waste any of it on the acquiring of an antiquated form of expression." In regard to the claim that Latin prescriptions guard a patient from knowledge which might be prejudicial, he replies: "Inasmuch as it is the popular opinion that doctors use Latin in prescription writing to keep the laity in ignorance for selfish ends, it seems high time that we antagonize this idea; and we can do this most emphatically by using English. This we can also do with perfect safety, for secrecy is very rarely, if ever, essential in the practice of the up-to-date physician, who generally prefers to take his patient into his confidence than to keep him in ignorance. Deception is not practiced by the true physician. Therein lies the special difference between the quack and the honest medical man." (*Jour. A. M. A.*, May 27, 1916, p. 1696.)

ICHTHYOL.—The American agent for ichthyol—the sole importer—announces that his supply of ichthyol is exhausted. As fraudulent substitutes are offered for sale, this state of affairs should be known to physicians (*Jour. A. M. A.*, May 27, 1916, p. 1734).

NONSPECIFIC TREATMENT OF DISEASE.—Evidence is accumulating that certain therapeutic effects ascribed to specific treatment with vaccines or serums, have been due to nonspecific effects produced by these preparations. Jobling and Peterson (*Jour. A. M. A.*, June 3, 1916, p. 1734) review the evidence along

these lines. They conclude that too much reliance has been given to the idea of specificity and that we have refused to consider evidence of nonspecific therapeutic results. We should, however, not cast aside all ideas of specificity in disease, a conception which has been the foundation of vaccine therapy. Miller and Lusk (*Jour. A. M. A.*, June 3, 1916, p. 1756) in a paper dealing with one phase of nonspecific therapy, report improvement in cases suffering from arthritis following intravenous injection of typhoid vaccine. It would be of interest to know how permanent the improvement was and in how many cases the cause of the arthritis was found and removed. Also, we must bear in mind the query of Theobald Smith: How much energy does a reaction of this sort cost the patient, and is the final result worth the cost? (*Jour. A. M. A.*, June 3, 1916, p. 1784.)

A CASE OF BETA-EUCAIN POISONING—T. G. Orr, Kansas City, Mo., reports a case of beta-eucain poisoning. Toxic symptoms appeared after an operation in which 3 ounces of a 0.25 per cent. beta-eucain hydrochlorid was used for the local anesthesia. After the toxic symptoms had completely disappeared, the patient died suddenly five days later. Necropsy showed an embolus in the left coronary artery (*Jour. A. M. A.*, June 10, 1916, p. 1857).

EFFICIENCY AND NONTOXICITY OF "ARSENOBENZOL"—Udo J. Wile, Ann Arbor, Mich., reports that during the last six months 612 injections of "Arsenobenzol" from the Philadelphia Polyclinic have been administered at the University of Michigan Hospital. Wile concludes that the immediate therapeutic results from the use of Arsenobenzol are fully as good as those following the use of Salvarsan and that, given with proper precaution, the drug has shown itself fully as little toxic as Salvarsan. The conclusions refer to intraspinal medication as well as to intravenous (*Jour. A. M. A.*, June 10, 1916, p. 1880).

BOOK REVIEWS

SURGERY, GYNECOLOGY AND OBSTETRICS. July, 1916.

The "Technique of Splenectomy," by Dr. D. C. Balfour of Rochester, Minn., is the leading article in this issue. It is followed by nineteen original articles. The Clinical Congress of Surgeons of North America announces the preliminary arrangements for the Philadelphia meeting, October 23 to 28.

RULES FOR RECOVERY FROM TUBERCULOSIS. A Layman's Handbook on Treatment. By Lawrason Brown, M.D., of Saranac Lake, N. Y. Second Edition, revised and enlarged. 12 mo., 184 pages. Cloth, \$1.25 net. Lea & Febiger, Publishers, Philadelphia and New York, 1916.

The first edition of this little handbook is said to have met with such a prompt and wide popularity that this second edition was needed to supply the growing demand for this work. It gives the layman just what he needs to know in a way that he can really understand it. If the physician who has to deal with cases of pulmonary tuberculosis would see to it that each one of them gets hold of this book and follows the advice given therein he would find out that it would be one of the best things he could possibly do for these patients.

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PROGRESSIVE MEDICINE. Volume XIX, Number 2 (June, 1916). Edited by Hobart Amory Hare, M.D., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College. Assisted by Leighton F. Appleman, M.D., Instructor in Therapeutics, Jefferson Medical College. Lea & Febiger, Publishers, Philadelphia and New York.

Hernia is discussed by Coley; general abdominal surgery, exclusive of hernia, by Gerster; gynecology by Clark; diseases of the blood, diathetic and metabolic diseases, diseases of the thyroid, spleen, nutrition, and lymphatic system by Stengel; and ophthalmology by Jackson.

This is a fairly large volume, comprising 475 pages, and as usual contains all the new developments in these branches since the last review of a year ago.

THE CLINIC OF JOHN B. MURPHY, M.D., at Mercy Hospital, Chicago, Volume v, No. 3, June, 1916. Published bi-monthly by W. B. Saunders Company, Philadelphia and London.

This is an abdominal number and contains on the whole a series of cases of real interest.

In the back of this issue is added a very interesting table of the proportion of deaths in decades from birth to 100 years, showing the diseases causing the greatest number of deaths in the order of their frequency. Attention is called to the rôle of cancer which is said to be curable by early operation. The economic loss in figures is startling, indeed.

THE KINETIC DRIVE. Its Phenomena and Control. By George W. Crile, M.D., Professor of Surgery at the Western Reserve University. Octavo of 71 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, \$2 net.

In this book Crile publishes the Wesley M. Carpenter lecture which he delivered before the New York Academy of Medicine last year. The author states that this lecture is rather an epitome of a monograph now in preparation which will include all the experimental evidence upon which the theory of the kinetic drive is based.

This idea of Crile's which emphasizes the value of a mechanistic view of human life in the study of both normal and abnormal processes certainly is quite original. It introduces an idea that leads one to think and to wonder. Before agreeing to accept the underlying theory one would want to study critically not only the evidence in its favor but all evidence or arguments that could be brought against it. It is for this reason that we are awaiting the larger completed work with a great deal of interest.

TREATISE ON FRACTURES, by John B. Roberts, A.M., M.D., F.A.C.S., Professor of Surgery in the Philadelphia Polyclinic and College for Graduates in Medicine; and James A. Kelly, A.M., M.D., Attending Surgeon to St. Joseph's, St. Mary's, and St. Timothy's Hospitals; Associate in Surgery in the Philadelphia Polyclinic and College for Graduates in Medicine. With 909 illustrations, radiograms, drawings and photographs. Cloth, \$6. J. B. Lippincott Company, Philadelphia and London.

Although several very good new books on fractures have appeared recently, a book of the high grade of excellence that these authors have succeeded in turning out can be assured of a very favorable reception.

The large number of illustrations, a total of 909, all of them very good and many of them unusually good,

is one of the special noteworthy features of this new book.

Evidently interest in the subject of fractures must be increasing. The Roentgen ray must have helped to stimulate this interest probably more than any other factor. No general physician or any one having to deal with fractures would want to or ought to be without a good text-book on fractures. For such a purpose, this new book can be highly recommended.

1915 COLLECTED PAPERS OF THE MAYO CLINIC, Rochester, Minn. Octavo of 983 pages, 286 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, \$6.00 net; half morocco, \$7.50 net.

This volume already seems to have become an established institution, one that is looked for with the greatest interest by a large element of the medical profession. Although many—perhaps most—of the papers in this volume have attracted special notice in the journals in which they originally appeared, one feels a certain new interest and pleasure in going over them again. These papers from the Mayo Clinic bring to us information that is original and that is worth knowing, for what the authors present is based not only on a broad experience but on material that is worked up under a system that is without equal anywhere. For this reason these yearly volumes from the Mayo Clinic will find a place set aside for them in the library of every up-to-date physician.

We must call attention to a typographical error overlooked in the proof-reading. On page 844 "diganosis" is used for diagnosis. Further we beg to suggest that on page 885 the heading "Studies in the Etiology of Cancer" would read better were it written Studies on the Etiology of Cancer.

THE MEDICAL CLINICS OF CHICAGO.—Volume 1. Number VI (May, 1916). Octavo of 229 pages, 22 illustrations. Published bi-monthly. Price per year: paper, \$8; cloth, \$12. Philadelphia and London. W. B. Saunders & Company.

Two new clinicians make their appearance in this issue. Dr. J. C. Friedman, of the Michael Reese Hospital, discusses chronic pain in the right iliac fossa, and Dr. Joseph Zeisler presents a case of mycosis fungoides. Both of these clinics are of more than usual interest.

Abt's talk on rickets is one that every general practitioner ought to read, for there he can find out all that is known on that subject up to the present.

Mix's special consideration of hematuria is very instructive. Hamill's talk on traumatic neurosis is very interesting, and Hamburger's discussion of the Allen treatment of diabetes ought to be of immense practical help to everyone who has to treat this disease.

The other clinics are as interesting and instructive as any that have appeared until now, except the talk by Tivnen on "the relation of the upper respiratory tract to metastatic infections." That was a great disappointment. Where we expected a good complete review of this subject, with perhaps the addition of something original, we found only a mediocre, hasty review with absolutely nothing new, and too much repetition. From a clinician of his reputation we expected a great deal more and something much better than what we were able to get from that clinic.

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NEXT ANNUAL SESSION, FORT WAYNE, SEPT. 27, 28 AND 29, 1916.

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THE INDIANA STATE MEDICAL ASSOCIATION

Next Annual Session, Fort Wayne, September 27, 28 and 29, 1916

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ORIGINAL ARTICLES

BENZOL IN THE TREATMENT OF LEUKEMIA*

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AND

JANE M. KETCHAM, M.D.

INDIANAPOLIS

We have to report a case of myeloid leukemia treated with benzol. Benzol is a comparatively new therapeutic agent. Its toxic action, however, was noted some years ago. The first reported cases showing the toxic action of benzol were probably those of Santesson of Stockholm, who, in 1897, had four fatal cases—men who worked in a bicycle-tire factory where benzol was used as a solvent for rubber. He remarked the great reduction of the white cells in the blood picture, with only a slight reduction in the red cell count. His attention seems to have been focussed chiefly on the marked purpuric eruption which all the cases showed. By experimenting with benzol on rabbits he succeeded in producing a similar condition with hemorrhages into the pleura, lungs, mucosa of the stomach and intestine, and once into the pericardium. In one of the fatal cases in man he found a fatty degeneration of various organs. This he likewise succeeded in reproducing in rabbits.

But the real nature of benzol poisoning remained to be demonstrated by Dr. L. Selling of Johns Hopkins Hospital. In July, 1909, there was a remarkable run of cases in Dr. Barker's clinic. These were three young girls, all about 14 years of age, who presented themselves at the hospital only a few days apart. They all showed purpuric eruptions, complained of weakness, abdominal pain, nausea and giddi-

ness, and had severe hemorrhages from the mucous membranes. Two of the girls died within a week; the third recovered and went home. Clinically, they were diagnosed as hemorrhagic purpura. Their blood examinations showed marked anemia and leukopenia, the white cells being as low as 140 per cm. in one of the patients shortly before death. The blood platelets were greatly reduced. The most striking thing at necropsy of the two fatal cases was the pathology of the marrow of the long bones. In one case, in gross appearance, the marrow was a dull ochre-yellow color; in the other a deep dark red color which might have been mistaken for a hyperplastic marrow. But smears from both cases showed a very decided aplastic marrow. The predominant cell was the normal red, which was pallid, slightly basophilic, but with no great irregularity. There were no regeneration forms, as in pernicious anemia. Leukocytes were extremely scanty, were chiefly of the lymphocytic and myeloblastic types which showed various degrees of degeneration. It was noted in one case that the spleen showed areas of hyaline necrosis affecting the malpighian corpuscles. So putting the clinical and the postmortem findings together, Selling did not hesitate to classify the cases as aplastic anemia.

Since it was so unusual to have three such cases in quick succession, an investigation was instituted. The three girls had worked in the same department of a canning factory. Out of about twenty other persons employed in this department, two more girls and two men were discovered who showed a few purpuric spots and whose blood showed a slight grade of anemia, the leukocyte count varying from 3,900 to 5,200 per cm. In this department the tops were cemented on the tin cans, and as a substitute for solder a composition was used consisting chiefly of rubber and resin dissolved in benzine. After being applied the cement hardened by the evaporation of the benzine. In

* Read before the Medical Section of the Indiana State Medical Association at the Indianapolis session, Sept. 24, 1915.

this manner about 10 gallons of benzene evaporated in the room every day. Feeling convinced that the benzene was the cause of the trouble, Selling completed his investigation by a series of animal experiments.

Here it would be well to state that pure benzol is the same as benzene of organic chemistry, the first of the series of closed chain hydrocarbons, C_6H_6 . The impure commercial benzol is a complex mixture from the first fraction in the distillation of coal tar, consisting chiefly of benzene (C_6H_6), toluene ($C_6H_5 \cdot CH_3$) and xylene ($C_6H_4 \cdot (CH_3)_2$). These should be carefully distinguished from benzin, which is distilled from crude petroleum and consists chiefly of hexane (C_6H_{14}), and heptane (C_7H_{16}), of the open chain hydrocarbons.

Selling experimented with the commercial benzol used in the factory and various fractions of it, and then with C. P. benzol and toluene, and decided from his results that the essential toxic agent was the benzol. He succeeded in producing in rabbits in a very short time a marked leukopenia, in one case a count of 20 cells per cm. was obtained. Usually death occurred before such a low point was reached, even if the benzol injections were stopped.

In the earlier stages there was usually an outpouring of a large number of abnormal elements among the white cells, with typical large lymphocytes, with large deeply staining nucleus and a small amount of basophilic protoplasm, or closely related cells which showed a varying degree of basophilia of the protoplasm and irregularities in the nucleus. I mention these cells because we meet with them in such large numbers after the therapeutic exhibition of benzol.

At necropsy the bone marrow of the animals showed marked aplasia. The polymorphonuclear cells had almost disappeared; the myelocytes showed marked signs of degeneration; the nongranular elements suffered in much less degree, and the red cells were practically uninjured.

From his studies Selling felt justified in identifying benzol poisoning with the clinical entity aplastic anemia, which two conditions have the following in common:

1. Only slight changes in the red cells.
2. Absence of regeneration forms of red cells.
3. Scantiness of platelets.
4. Leukopenia.
5. Diminution of the granular types of white blood cells, with relative increase of the nongranular element.

John H. Musser, Jr., in reviewing the work on aplastic anemia, feels that Selling's experiments with benzol have firmly established aplastic anemia as a nosologic entity, a disorder dependent on primary disturbance of the marrow, representing a type of hemopoietic degeneration and not to be classed as a type of hemolytic anemia, of which pernicious anemia is an example, nor yet with the phanerogenetic anemias. However, there has been some question whether the condition should be classed with the anemias at all, since the leukopoietic tissue is primarily affected and the red cells are untouched until late in the disease. But Musser considers the fact that we can have such a condition clinically, and can now produce it experimentally with benzol in animals, a condition in which but one type of white cell is affected, as excellent evidence of the polyphyletic theory of the origin of blood cells. Physiologists are divided into two camps on this question. The adherents of the monophyletic theory hold that all cells, both red and white, take their origin from one common parent cell; the adherents of the polyphyletic theory contending that the red cells and the granular leukocytes take their origin from the endothelial cells of the blood capillaries of the bone marrow, whereas the nongranular lymphocytes take their origin from the endothelial cells of the lymph vessels of the lymphatic tissues.

I mention this in order to emphasize three facts which I believe are now well established:

1. That there is a definite clinical entity, aplastic anemia.
 2. That benzol in proper dosage and in proper time can produce it.
 3. That when produced it presents a picture, pathologically and hematologically, diametrically opposite to the picture of myeloid leukemia.
- The first two being true, and so clearly set forth by Selling in February, 1910, it seems strange that some one did not immediately formulate the third proposition and proceed to use benzol in the therapy of leukemia. It seems but a short step, as Barker says, yet it took two years to make it. It was not until July, 1912, that von Koranyi of Vienna published his first case reports of the clinical use of benzol in leukemia. So to Selling belongs the credit of carefully working out the toxic effect of benzol, while to von Koranyi belongs the distinction of having the scientific imagination to profit by Selling's findings and apply them therapeutically.

Koranyi's results were so remarkable that other clinicians were soon led to try the benzol treatment and case reports began rapidly to

accumulate. Kiralyfi, a colleague of Koranyi, reported seven cases of leukemia treated with benzol, all with apparent cure in varying lengths of time from three weeks to five months. Then Stein reported a favorable case; Stern added another. Then Klein reported on twenty-two cases, most of which were favorable, but, though he stated his results were not quite so encouraging as Koranyi's and Kiralyfi's, he still thought benzol was destined to play an important rôle in leukemia. Rosler reported two cases apparently cured. Dr. Frank Billings of Chicago was the first in this country to call attention to this use of benzol. He made a very favorable report of five cases in *The Journal of the American Medical Association* for Feb. 15, 1913, and then a longer series in the *Transactions of the Association of American Physicians* for the same year. Then came Meyers and Jenkins of New York; Barker and Gibbes of Johns Hopkins; F. H. Smith of Abingdon, Va.; Sappington and Pearson of Philadelphia, and C. Graham of Providence, R. I.

From his experience with the drug von Koranyi formulates the following conclusions:

1. Benzol first tends to increase the white blood cells, but shortly leads to an improvement in the leukemic condition. The fall in the white count usually begins at the end of the second week or the beginning of the third week of therapy, the decrease at first being slow and then very rapid. The general condition of the patient is improved, just as with the Roentgen ray and other forms of treatment.

2. Benzol acts more slowly than the Roentgen ray, but some patients improve under its administration who do not respond to the usual therapy. Previous or concomitant applications of the Roentgen ray seem to hasten the action of the drug.

3. The drug can safely be given in doses of 4 gm. daily, and its administration with equal parts of olive oil seems to lessen the tendency to produce unpleasant symptoms, such as heartburn, eructations and vertigo.

The experience of other clinicians has as a rule confirmed these original statements of von Koranyi's. There have been some, however, whose results have not been so gratifying. Koranyi himself reports two cases of failure. Quadrone and Buzzano, in Italy, report little if any benefit in four cases treated. Klemperer and Hirschfeld regard benzol as a dangerous remedy, as it caused serious injury in animals. They got a reduction in the number of leukocytes, but induced such severe necrosis of organs that its use in large doses in therapeutics

seemed dangerous. Neumann reports a case from Giessen, advising against too high hopes for the treatment. He followed von Koranyi's directions, gradually increasing the dose from 0.5 gm. twice a day to 1 gm. four times a day, and then after getting the desired results gradually reducing the dose. The course took thirty-nine days, with the patient practically cured. But suddenly she grew worse, with fever, diarrhea, epistaxis and hemorrhagic stomatitis and rhinitis, and died thirty-nine days after the withdrawal of the benzol. The bone marrow at necropsy resembled the findings reported by Selling in benzol-poisoned rabbits. It is very evident that this patient had too much benzol, though she received the usual dosage. Jespersen, and also Muhlmann, in Germany, in 1913, and Graham of Providence, R. I., only a few months ago, have reported cases in which, after the usual subsidence of the leukemic blood picture and general improvement under benzol, there supervened in a short time an acute flaring up of the leukemia itself, and in each instance the patient died of the disease, with extremely high leukocyte counts, possibly in spite of and not because of the benzol.

Pappenheim early reported his experience with healthy rabbits injected with 0.03 c.c. benzol, which showed severe injury of the kidneys and liver, and so tried to discourage the therapeutic use of benzol. Von Koranyi in reply to his critics very justly remarks that the conditions in healthy rabbits cannot be compared with those in leukemia in man, and that Pappenheim's dosage was relatively much larger than that used clinically. Tedesko further adds that he never witnessed any injury of the kidney or impairment of the general health at the maximal dose of 3 gm. per day. Other clinicians—Billings and Barker in this country—have not observed any untoward symptoms from the continued administration of 4 gm. and even 5 gm. per day.

The fact, however, that various anomalous and even fatal results might occur, should make one very cautious in the administration of benzol, and inclined rather to err on the side of too small than too large dosage.

F. H. Smith of Abingdon, Va., made his first report in *The Journal of the American Medical Association* for March 21, 1914, on two cases, one an adult with lymphatic leukemia, in which case the benzol was without effect; and the other a boy of 13 with myeloid leukemia, whose blood picture returned almost to normal and who showed marked clinical improvement. Smith again reported on this same boy in *The Journal*

of the American Medical Association for May 22 of this year. During the past eighteen months the boy had remained clinically well and had attended school, but on account of increasing white cell counts and enlarging spleen he had required four or five courses of benzol for varying periods. What the final result in this case may be cannot be predicted. Smith expresses his disappointment at not getting some permanent effect from the benzol and states he confidently expected the boy to die, either of the leukemia or of aplastic anemia, as result of the benzol. Notwithstanding this, he says the chemical has a most remarkable inhibiting influence on the course of the disease, and that "it is the most helpful of all known agents in the treatment of leukemia of this type."

Benzol has likewise been used in cases other than chronic myeloid leukemia. Several observers report cases of acute leukemia in which the treatment has been entirely without effect. Others have used it with good success in lymphatic leukemia, but with less spectacular result than in the myeloid type. In these cases generally the leukocyte count has returned to normal, or near normal, but the percentage of lymphocytes remains relatively high. Klemperer and Hirschfeld tried it in three cases of pernicious anemia; in two with no effect, as might be expected from the known action of the drug; in the third with unmistakably curative effect, but no more than after arsenic. A few cases of polycythemia with splenomegaly and likewise one of Hodgkin's disease, have been successfully treated with benzol.

From the case reports and from the knowledge we have of the specific action of benzol, it would be just to expect to get uniformly satisfactory results from the administration of benzol only in the recent cases of chronic myeloid leukemia. The fatalities have been in the very acute cases or in much older cases of several years' duration which have received various other treatments—Roentgen ray, arsenic, etc. We cannot expect to get such remarkable results in cases of polycythemia, Hodgkin's disease, pernicious anemia or even lymphatic leukemia, because the benzol does not reach the fundamental pathologic condition in these diseases. In myeloid leukemia, however, the use of benzol is one of the most striking instances of the selective action of a drug that we know of. In myeloid leukemia we have a condition which is the result of a toxic stimulation of the most important hemopoietic tissue in the body, the bone marrow. This seems specific enough, but the toxin, whatever its source, acts still more specifically. It stimulates only the leukopoietic apparatus, causing a great increase of the white

cells of the blood, and most wonderfully leaves untouched, primarily, the erythropoietic marrow; in time there is a depression of the red marrow and we get a secondary anemia. Still more wonderfully, this toxin does not stimulate all the leukopoietic tissue in equal degree, but chiefly that portion of it which generates the granular white cells, so that these cells—the myelocytes and the polymorphonuclear leukocytes—are the ones which are met with in such profusion in this disease, leaving the nongranular lymphocytes very little affected. Now comes the almost startling specific action of benzol, for it has been proved clinically and experimentally that it expends its activity primarily on that portion of the bone marrow which is concerned in the production of the granular leukocytes, leaving unaffected the tissues which manufacture nongranular lymphocytes and erythrocytes. But benzol, instead of causing stimulation and hyperplasia of this leukopoietic tissue, as does myeloid leukemia, causes inhibition and then hypoplasia, so that we quickly get a reduction in the granular white cells and a gradual increase in the red cells. The fact that benzol meets the requirements of this disease (myeloid leukemia) so nicely and exactly is reason sufficient that its success could not be so marked in the various other diseases in which it has been tried.

From a study of the literature and from our experience with this one case, we feel justified in concluding that benzol has a wonderfully selective action in chronic myeloid leukemia, if uncomplicated and not of too long duration; that one can count with considerable assurance on getting a rapid reduction in the number of leukocytes; on getting a normal, or nearly normal, blood formula; a rapid diminution in the size of the spleen; an increase in the red cell count and the hemoglobin; and a concomitant improvement in the general health of the patient, increase in weight, etc. One should never forget, however, that the drug is a powerful poison, a two-edged sword, as Billings calls it, and that we must be careful in our use of it not to carry its effects too far, thus completely destroying the function of the bone marrow and substituting a grave aplastic anemia for the leukemia. So observers generally concur that the patient ought to be in a hospital, in bed; that the gastrointestinal tract, kidneys and liver be watched carefully for toxic symptoms; that blood counts should be made every few days; that the benzol should not be increased in dosage without definite warrant, and that its administration should be entirely stopped considerably before the white count has returned to normal.

With these precautions there should be no grave results. Of course, time only can tell whether these cases have been permanently cured; whether there has been merely a remission of the disease which may require periodic and indefinite benzol treatment, or the disease return in a more fulminant and malignant form with rapidly fatal result.

We take pleasure in presenting this case because we feel that we have produced a clinical cure. Her case is remarkable in a number of ways. She had but one course of benzol, and that over a period of just three months. She received no other medication and no Roentgen-ray treatment. The benzol was begun in doses of 5 minims three times a day and gradually increased to 35 minims three times a day. It was discontinued Oct. 26, 1914, and she has received none since, remaining perfectly well and successfully passing through pregnancy without any alteration in her blood picture or size of her spleen. She responded in a very typical manner to the benzol medication. Her white count showed at first the usual stimulation, increasing from 350,000 to 456,000, and then began to drop, somewhat slowly at first and then with startling rapidity, reaching 31,000 in about six weeks. Here the benzol was stopped, but the drop in the leukocyte count continued until it reached 2,300, and we were fearful that the drop would continue with fatal result. But the count soon returned to normal and has stayed within normal limits ever since. The size of her spleen diminished gradually, and from almost filling her abdomen it has reduced until now it cannot be palpated.

The blood formula is practically normal, with absolutely no abnormal elements remaining. In making differential counts during the benzol treatment we experienced the difficulty that other observers have noted. The blood picture is entirely new. Such signs of degeneration, fragmentation and vacuolation, such bizarre shapes, so marked a basophilia, are met with that it is very confusing, and no two workers would probably arrive at the same formula in counting the same slides. So we must remember in looking at stains that we no longer have the picture of a pure leukemia, but in addition a blood picture in which the hemopoietic organs have been poisoned by benzol. One of the most striking signs of this poisoning is the great increase in basophils. These are the cells which Selling has described as appearing in his animal experimentation with benzol. Many of the new cells are probably myeloblasts or immature myelocytes which appear in large numbers in some cases of leukemia.

CASE REPORT

July 18, 1914, Dr. Barry and I first saw the patient at the dispensary. She was unable to speak English, and a history was obtained with difficulty. Family history not remarkable. Father died of acute jaundice; mother and two step-brothers living and in good health; no family or personal history of tuberculosis or lues. The patient had arrived in this country four months previous, and her husband says that at that time she was fat and in good health. Her personal history was negative; was always well and strong as a child. At the age of 17 years she had an attack of typhus fever and made a good recovery. About four years ago she had a right hemiplegia and was in bed for six months but recovered entirely. Had been married twelve years and no miscarriages. Two children; one died at childbirth from prolapsed funis; second died at age of nine years from acute mastoiditis.

Present Illness.—Patient has noticed rapidly growing tumor in left side for last six weeks; has lost three pounds within the last week since under observation.

Physical Examination.—Woman, aged 29 years, well developed, but atrophic. Skin dry and warm; areas of pigmentation brown in color along upper border of mammary gland and below lower border of ribs; areas vary in size from pin head to patches the size of palm; nails not abnormal. Capillary response slow, no adenitis, thyroid normal, tonsils very slightly enlarged with no evidence of previous or existing inflammation. Slight swelling of the ankles.

Chest examination: Lungs negative, cardiac pulsation visible at third and fourth interspace. Apex beat in fourth interspace $1\frac{1}{2}$ inches from the sternum, right border $1\frac{1}{8}$ inches to the right of sternum. Blowing murmur systolic in time heard at second interspace. Not transmitted beyond precordium. Sounds at apex and base clear.

Abdomen not tender and no rigidity. Liver dulness third to sixth interspace midclavicular line. Spleen markedly enlarged downward and to the right, extends 2 inches beyond midline and rests on the crests of the ilium, notch plainly felt. Pelvis negative.

We kept the patient under observation for one week, at end of which time she was referred to the Robert W. Long Hospital and admitted there July 28, 1914. We put her to bed and kept her in a recumbent position on a forced diet, and instituted the benzol treatment, beginning with 5 mm. three times a day, which we gradually increased until October 7, when the dose reached the maximum quantity of 35 mm. three times a day. The benzol was first given in an emulsion with olive oil, and later the pure benzol was given by the minim in capsules after meals. The patient sometimes complained of eructations but at no time did any vomiting or nausea occur. The patient sat up in a wheel chair for the first time on September 28. We discontinued the benzol on October 28 and iron, quinin and strychnin was given by mouth and citrate of iron $1\frac{1}{2}$ grains hypodermatically twice a week was given. The patient gained 27 pounds in weight and the spleen is no longer palpable. There was a slight ring of albumen present in the urine from September 4 until October 8, when the catheterized specimen failed to disclose any. The specific gravity varied from 1.010 to 1.020; the reaction being mostly neutral. Granular casts were found at times. The patient's blood pressure on admission was systolic 120,

diastolic 100. At present it is 120 to 180. The patient's Wassermann was negative. Dr. Barry and I made a weekly blood count during the patient's stay in the hospital, and on an average of one in two weeks since. Blood cultures were taken twice, both of which proved negative.

July 28 the white count was 314,000, hemoglobin 51 per cent. (Sahli). On September 3 the maximum white count of 450,000 was reached. The red cells at this time were 2,500,000, hemoglobin 53 per cent. The maximum benzol of 35 minims three times a day on October 7 gave the white cell count of 150,000, red cells 3,600,000, hemoglobin 59 per cent. October 28 the benzol was discontinued; the white cells at that time numbered 31,000, the red cells 5,800,000. December 18 the minimum white count of 2,300 was reached, red cells 4,000,000. Jan. 11, 1915, the white cells numbered 7,800, the red cells 5,600,000. The differential count is as follows:

July 28: Myelocytes 44.5 per cent., of which 5 per cent. are eosinophils; polymorphonuclear leukocytes, 33.5 per cent.; lymphocytes, 15 per cent.; eosinophils, 4.5 per cent.; mononuclear leukocytes, 2.5 per cent.

October 20: Myelocytes, 19.5 per cent.; polymorphonuclear leukocytes, 72.5 per cent.; small lymphocytes, 4 per cent.; large lymphocytes, 3.5 per cent.; eosinophils, 0.5 per cent.; indented nucleus, 0.5 per cent.

Feb. 5, 1915: Polymorphonuclear leukocytes, 72 per cent.; large lymphocytes, 18.7 per cent.; small lymphocytes, 9.3 per cent.

Sept. 4, 1915, at the Robert W. Long Hospital, I delivered the patient of a child. The labor was normal and uneventful, except for a postpartum hemorrhage of moderate severity. The baby was a term child, fully developed, weighing 8 pounds. The spleen is not palpable. A leukocyte count on the tenth day shows a white count of 9,000. The stained specimen contains polymorphonuclear leukocytes and large and small lymphocytes. No myelocytes were seen. At present the patient's blood picture is as follows: hemoglobin (Sahli), 72 per cent.; red count, 3,000,000; white count, 14,000.

The stained specimen shows a preponderance of polymorphonuclear leukocytes. No myelocytes are seen. For the past few days the patient has had a slight mastitis which might account for her increase of leukocytes, or it might be due to the presence of lactation. This is the first variation in the white counts since January.

DISCUSSION

DR. C. S. BOND, Richmond: You can see at once that it is difficult to open the discussion of this subject, because the literature has been thoroughly gone over by the essayists, and there could be very little added. These cases are not very common, and since the introduction of the benzol treatment it has not happened to me to have a case of splenomyelogenous leukemia. so I cannot emphasize from a clinical standpoint the points that have been brought out in the paper.

Six or eight years ago it was considered that death was inevitable for these patients. The time until death has been very much prolonged, either from the influence of the individual or

from medication. The course of leukemia is very uncertain, and while this patient might after a time relapse into the same condition as before, yet she has been in a neutral state since last October and enabled to overcome the vicissitudes of carrying a child and parturition, and it looks as if she had a fair chance for permanent recovery. I think it would be very interesting to know, and I hope the doctors will follow this case and be able to report next year the nature of the conditions that take place in her blood during the coming year.

If we are to know absolutely about benzol in these cases we must be able to use our knowledge. We are to be congratulated that we have a drug given to us which is so specific as this drug. It cannot help, in the future, but be of great benefit in diseases of the bone marrow. I hope somebody will make further investigation of the white cells of the bone marrow with reference to this particular infection. We have a drug here which is very powerful, and, as the essayist has pointed out, we must be careful, if we have a case come into our hands which presents these particular features, not to carry the benzol treatment too far, because we are liable to produce serious damage, not by reducing the leukocytes to 9,000, but perhaps down to 150, and we should remember that in certain individuals destruction of the corpuscles takes place a long time after the drug is discontinued. It will be well for a doctor having a case of this kind to quit the benzol treatment when the leukocyte count is something short of 40,000 or 50,000, and then see what follows. On the other hand, if you quit very far short of normal you are liable not to get results, because there is a toxic effect by the further development of the body itself until it becomes a resisting body, and after a while you do not have the same result from the drug. You must be careful about administration to get the proper effect of the drug. You can kill your patient from benzol, which would be as bad as to have the patient die from leukemia primarily. But in the next year, if we have the attention given to this drug that we have in the past year, we certainly will have a standard set up which we can feel pretty safe in following.

The disease is so terrific in some cases that it runs a rapid course. Again, the toxin is not so aggravated and the cases run along for several years; so we have not yet a standard for the treatment of the different varieties of this disease which probably will come about in the course of time.

DR. W. A. FANKBONER, Marion: It has been suggested that this case be reported at our next session, and I hope most sincerely that this will be done; but in a year we are likely to float away from the details, so if it is allowable and according to rules, I think the essayists should

complete the record of this case up to the time of publication of their papers in *THE JOURNAL*.

THE CHAIRMAN: It will be permissible and we shall be pleased to have the request carried out.

DR. A. C. KIMBERLIN: I want to add one thing in regard to the treatment of these cases. Of course, we all know that the influence of benzol is to reduce the number of white cells. Personally, I have had better success with the use of the Roentgen ray, and it is the treatment that concerns us most. There is just this to be said in the use of the Roentgen ray, arsenic, castor oil or any treatment, and that is that the essential point is to be familiar with the temperature curves before beginning active treatment, the effect of all which is to reduce the number of white cells and liberate suddenly an increased amount of toxin, which of itself is a very dangerous thing. In the treatment of these cases we should watch the behavior of the lymphatic tissue, especially about the throat, and we should be thoroughly familiar with the pulse rate of the individual as well as the temperature curves. All these are our safeguards. I have seen two deaths from Roentgen ray applied too long at a sitting, so to speak, and applied improperly. It is not the thing to start treatment of the spleen itself unless you have a case such as occurs in a certain type of adult, an hysterical person—never a child—it is not safe to begin treatment by making application over the spleen, because the retrograde changes frequently pass beyond our control without giving any warning. It is very much better to begin on the atonic tissues first. Strange to say, these cases do not react—if followed carefully in the laboratory examinations—they do not react equally to each kind of bone. You take the irregular bones that in distinction from the long bones we call the flat bones, and this disease seems to have a special selection for certain bony tissues there, so we frequently start over the ribs; again, it will be the long bone that will react. You should approach the spleen with care, and we always should feel our way and mark our progress by the temperature, by the pulse and by close attention to the mucous membrane of the throat and especially of the tonsils. The tonsils have a tendency to take on hydroplastic conditions. They are at first red, and when that occurs it is time to stop, whether you use benzol or arsenic, or apply the Roentgen ray, because it bespeaks impending injury due to excess of toxins and is practically always associated with rise of temperature, which should at once be taken into account.

DR. JOSEPH M. BARRY (closing): I want to emphasize a few points in connection with this case. Most of the cases that have been reported have been treated by other means, either alone or in conjunction with the benzol treat-

ment. This case had benzol and nothing else; she has never had Roentgen-ray treatment. She has only had one course of benzol. The other men reported cases in which they gave benzol at different intervals and the blood count began to run up again. This woman has had one course of benzol and practically no other medical treatment. She had her benzol treatment over a period of just about three months, beginning with 5 minims three times a day and increasing to 35. She received the last benzol Oct. 26, 1914. She has remained practically well and has passed through pregnancy during that period.

We experienced the same difficulty in making the blood count that the other men reported. The blood is entirely different after the administration of benzol. There is a marked degeneration of white cells and this is evidenced chiefly by basophilic granulation.

We shall be glad to keep this woman under observation and make another report, either in *THE JOURNAL* or at the next session of this Association.

Date	White Count	Dosage—Benzol	Weight
July 28.....	350,000	Minims XV or Cm. I	104 lbs.
July 31.....	314,800		
August 10.....	272,000	Drops XV	
August 17.....	290,000		
August 24.....	286,400		
August 28.....	.....	Minims XX	
August 31.....	418,000		
September 2.....	.....	Minims XXV	
September 3....	456,000		
September 7....	422,000		
September 13...	207,600		
September 21...	246,000		
September 22...	.....	Minims XXX	
September 28...	269,000		
October 7.....	180,000	Minims XXXV	100 lbs.
October 13.....	158,900		
October 20.....	54,000	Minims XX	102½ lbs.
October 26.....	31,000	Discontinued	
November 3....	15,200		107 lbs.
November 9....	7,260		
November 17...	4,400		
November 24...	3,400		120 lbs.
December 1....	4,000		125 lbs.

COMPLETION OF CASE HISTORY, AUG. 1, 1916, BY DR. BARRY

As stated in the preceding history the patient's total leukocyte count was at first 350,000, which rose to 450,000, and then gradually dropped till it reached normal limits the first week of November. The abnormal elements disappeared from the blood and the patient improved clinically and was dismissed from the hospital early in December, practically well. She became pregnant within a month and during the nine months of gestation was kept under close observation. Her leukocyte count and blood picture remained normal, notwithstanding this severe strain. She was delivered of a normal baby early in September, 1915, at the Long Hospital. We presented her, with the case report, at the annual session of the Indiana State Medical Association, September 22, 1915. The patient went home and was kept under observation for the next few weeks, being permitted to nurse her baby. Then for about two weeks she failed to present herself at the clinic. On October 31, Dr. Ketcham found her at her home in a very serious condition, and had her trans-

ferred to the hospital. She received some Fowler's solution, some iron arsenite hypodermically, and during the last five days of her life she was given small doses of benzol as a last resort. November 3, Dr. Gatch gave her 300 c.c. of blood by transfusion with the Kimpton-Brown tubes. There was a slight rise of hemoglobin for two days, but clinically her condition was hopeless, and she died in coma, Nov. 24, 1915, at 3:00 a. m. I regret to say we were absolutely unable to obtain an autopsy. I have here charts showing her temperature curve and blood findings.

During the final illness her skin and mucous membranes were extremely pale, translucent, and corpse-like in appearance. She was dyspneic and her air hunger increased as the end approached. The heart presented a heaving impulse over the whole precordium, and blowing murmurs were heard at each of the areas. The spleen was enlarged but did not reach the enormous size of a year before.

The blood condition is, of course, the phase of chief interest. The leukocyte count was 25,000 on admission to the hospital and gradually increased until it reached 74,000 on the night of her death. The erythrocyte

had been so numerous during the course of her previous leukemia. By November 18, the other cells remaining relatively constant, the total myelocytes had dropped to 18 per cent, and an entirely new element had taken their place. This new element is a cell that looks almost exactly like a small lymphocyte, with a nucleus staining deep blue and a small rim of protoplasm, which however is filled with large basophilic granules. I have not been able to find a description of these cells in any of the literature. But they unquestionably belong to the myeloid series, a forerunner, perhaps, of even the myeloblast. It would probably be more correct to say that they were the best cells that the leukopoietic tissue was able to produce in its crippled condition. On the night of her death, the myelocytes had further dropped to a total count of 12 per cent., whereas these small basophilic mononuclears had risen to 47 per cent., which relationship proves conclusively to my mind that they belong to the same series.

Now naturally the question arises, what was the cause of the patient's death? Did she die of benzol poisoning? Most emphatically not. She had had no benzol since October 26, 1914, and during that intervening year her blood picture had remained entirely normal through the strain of pregnancy, labor, and lactation. It is inconceivable that a chemical poison could have remained latent in the system for a year and then suddenly have acquired renewed toxicity with such rapidly fatal results. Also her blood picture was not the picture of benzol poisoning, which is that of the so-called aplastic anemia, in which the primary onslaught is upon the leukopoietic tissue, producing a marked leukopenia, and not upon the erythropoietic tissue, as in our patient, whose bone-marrow was still able on the night of her death to produce 74,000 leukocytes to the cubic millimeter. Neumann of Giessen, reported a case treated with benzol, practically cured, and then dying about one month later of the toxic effects of benzol. This patient had diarrhea and hemorrhages and the bone marrow at autopsy resembled the findings reported by Selling in benzol-poisoned rabbits. The leukocyte count was very low, a very different picture from our case.

Did she die of a recurrence of her leukemia? If so, she certainly did not present the usual picture of a myeloid leukemia. For in her previous attack of leukemia she had a leukocyte count of 450,000 and clinically was not alarmingly ill. In this fatal attack she had a count of only 74,000 on the day of her death, and four weeks before this, when her count was only 25,000, she was plainly moribund. In the cases reported which have died of a sudden accession of leukemia following benzol administration, the leukocytes have reached enormous numbers.

So then we are brought back to the fact that the fatal disturbance was in the red cells of the blood and not in the white cells. Did she then have a pernicious anemia? Certainly not. There was no evidence of a hemolytic agent at work, no signs of regeneration in the red cells, no poikilocytosis, anisocytosis, or polychromatophilia. But the whole situation indicated that her rapidly progressing anemia was due, not to increased hemolysis, but to destruction of the erythroblastic tissue itself.

Since then the toxic agent seems to have been affecting simultaneously the formation of the red as well as the white cells, did we have the condition described as leukanemia by W. von Leube of Wuerzburg. I believe this comes closer to a diagnosis. Under this designation von Leube describes a disease in which

Date	Erythrocytes	Leukocytes	Hemoglobin
Nov. 2, 1915	2,800,000	25,000	33% (Sahli)
Nov. 3, 1915*			
Nov. 4, 1915	.....	31,000	40
Nov. 8, 1915	.....	24,000	33
Nov. 15, 1915	1,088,000	22,800	31
Nov. 18, 1915	680,000	40,000	Couldn't read
Nov. 20, 1915	880,000	56,000	
Nov. 21, 1915	510,000	72,000	
Nov. 23, 1915	414,000	74,000	

* Transfused 300 c.c. blood by Kimpton-Brown tubes
Patient Died 3 a. m., Nov. 24, 1915

Differential Leukocyte Count	Nov. 1	Nov. 18	Nov. 23
Polymorphonuclear neutrophil.....	33.0	33.0	30.0
Small lymphocyte.....	6.5	6.5	10.0
Large mononuclear.....	2.0		
Transitional.....	0.5		
Polymorphonuclear eosinophil.....	0.5		
Myelocytes:			
Basophil.....	24.0	12.5	4.0
Neutrophil.....	0.5		
Promyelocyte or myoblast of Naegle	23.0	5.5	8.0
Degenerated cells incapable of classification.....	10.0	10.0	1.0
Small basophil (mononuclear).....		32.5	47.0

count and hemoglobin were, however, the most striking and alarming features. On admission, the red cell count was 2,800,000 and the hemoglobin 33 per cent. (Sahli). These rapidly diminished until the night of her death only three weeks later when the erythrocyte count was only 414,000 and the hemoglobin too low to be estimated on the Sahli hemometer. The blood looked like pink-tinged water. I have given here on the chart three differential counts, which well illustrate the characteristics of the blood as it changed during the progress of the disease. The first differential count on November 1st, needs little comment except to point out that almost half of the white cells were myelocytes, and that about half of these myelocytes were basophilic and the other half were so-called myeloblasts, that is, presented a rather uniform, slightly basophilic protoplasm entirely without granules. Most of them, however, showed many vacuoles in the cell protoplasm, which of course is evidence of degeneration. There were only a very few neutrophilic myelocytes and absolutely no eosinophiles, which

the picture is that of a leukemia associated with that of a pernicious anemia. In his case there was a red count of only 250,000, with normoblasts, megaloblasts, and a high color index; a white count of only 10,600 with 13.6 per cent. myelocytes (many non-granular), and a relative increase of lymphocytes to 40 per cent. The disease ran a rapid course, the patient, a boy of 10, dying within a week, running a temperature from 102 to 104. Von Leube states, after reviewing the clinical and postmortem findings: "We may, therefore, say that in this case we were dealing with a severe, perhaps infectious, disturbance of the process of formation of the blood cells in the bone marrow, and that this affected the red as well as the white blood corpuscles, with the result that both remained in an immature condition, the white cells being not even perfectly granular. This reduction of the function of the bone marrow in a few days led to the complete cessation of blood formation, and this to the destruction of the vitality of the organism." Our case resembled this except that we had a much higher white count, and did not have any nucleated red cells, or other evidence of immaturity in these elements. Whether our case would be accepted by von Leube as coming under this classification I do not know; but it is very evident that the pathological process which he describes was at work in our case, that is a poisoning of the bone marrow in toto, so that the development of both red and white corpuscles was affected.

Osler, however, states that leukanemia must be regarded rather as a clinical term than a pathological condition, and that the reported cases have presented clinical evidence of some severe infection. Also, in the *Archives of Internal Medicine* for December, 1915, Mark Marshall, of Ann Arbor, Mich., in reporting a case of general miliary tuberculosis, in which the blood picture closely resembled von Leube's description of leukanemia, comes to the conclusion that von Leube's case which gave rise to the conception of leukanemia, when viewed in the light of more recent studies of the blood changes in severe infectious processes, would have to be regarded as a case of general sepsis, with an unusual functional leukocytosis.

In this connection this case of Marshall's is worthy of attention; a woman, age 52, came under his care October 21, 1914, and after a progressively downward course, with irregular temperature ranging from normal to 103.8, she died Nov. 29, 1914. On October 27, the blood count was as follows: erythrocytes 3,000,000; leukocytes 16,480; hemoglobin 85 per cent. (Sahli). On November 21, the blood findings were: erythrocytes, 1,320,000; leukocytes, 23,840; hemoglobin, 20 per cent. (Sahli). On November 23, there was increased weakness, cyanosis, labored breathing; and the blood showed 13,000 leukocytes and hemoglobin 15 per cent. (Sahli). On account of the prolonged irregular temperature with a leukocytosis, a rapidly progressing anemia, and the absence of signs of any localized disease, a provisional diagnosis of streptococcus septicemia was made. A blood culture was negative. A differential white count made two days before the patient's death gave the following results; polynuclear leukocytes 42.5 per cent.; lymphocytes 4 per cent.; large mononuclears 18.5 per cent.; myeloblasts 2.4 per cent.; premyelocytes 1.8 per cent.; myelocytes 30.4 per cent.; the total myelocytic forms being 34.8 per cent.; two nucleated reds were found in one preparation. There were striking deviations from the accepted morphologic standards of the various types of leukocytes. All forms were poorly granulated and many polymorphonuclears and myelocytes were entirely with-

out granules. As there were no positive diagnostic points in either history or physical examination, the striking blood picture was looked upon as holding the key to a positive diagnosis. The short course and the severe anemia favored the diagnosis of acute leukemia, or more nearly perhaps leukanemia. At autopsy, a wide-spread miliary tuberculosis was found. Marshall searched the literature carefully and found reports of four cases of chronic myelogenous leukemia complicated by acute miliary tuberculosis (Quincke, Nana, Dock, and Warthin). He also found reports of cases by Roth, Kast, von Mullern and Grossmann, Bruchmann, and Masing, in which the diagnosis of leukemia had been made from the blood findings, but which showed wide-spread tuberculosis at autopsy. He states that Hertz regards the majority of reported cases of acute myelogenous leukemia as cases of severe infection; that there is no uniform etiology but that various infectious agents are capable of producing such a blood picture. Marshall concludes that his case is further evidence of the truth of these views.

So fortified by the reports of the various observers, I feel justified in concluding that our case did not die of benzol poisoning nor of leukemia, but of a virulent infection of some kind, possibly a miliary tuberculosis, which served synchronously to stir her leukopoietic tissue into renewed leukemic activities, and almost totally to destroy the erythropoietic tissue. I do not believe that it is going far afield to assume that our patient, after passing through a rather marked leukemia, and having had the additional strain of a pregnancy and lactation, together with unhygienic home surroundings, may have developed a tuberculous infection. Feeling as I do in regard to this, I shall not hesitate to use benzol again in a suitable case of spleno-myelogenous leukemia, if it can be kept under strict surveillance.

SOME LATER METHODS USED IN THE DIAGNOSIS AND TREATMENT OF STERILITY

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Knowledge of the existence of sterility is ages old, but many of the most potent factors in its causation are recent discoveries. All physicians have been importuned by distressed couples for the relief of this baffling condition, and the results of their efforts have been too frequently discouraging. Because of this some of the later investigations may be of interest. Persistent study of the sex organs, their functions and secretions, in the past few years, has resulted in the discovery of alterations, which, though not conducive to symptoms of ill health, yet are sufficient to prevent normal conception.

Sterility can be diagnosed many times in history taking and the apparent physical condition discovered by ordinary manual examination. Yet there is an increasing class of married

couples in apparent good health, with normal sex functions, who, after several years of married life, remain childless. For many years the belief has existed that certain marriages were childless because of an obscure fault of temperament or a natural insusceptibility of the wife to her husband's sperm. This belief was fostered by the fact that previous or subsequent marriages proved fertile in both individuals.

Lespinasse reports that experiments have shown many free spermatozoa in the abdomen. The leukocytes absorb or destroy the sperm as a foreign body, thus sensitizing the blood or producing the antibodies in the blood, rendering the wife sterile to that sperm. This, to my mind, is one plausible explanation of sterility in the healthy class of cases. Likewise, since pregnancy frequently takes place in such women after a long separation or continence, this acquired immunity would seem to have subsided.

The determination of the cause of sterility requires consideration of the past history of both partners, such as their general and sexual health and development. The male is suspected immediately should he give a history of sexual excess and venereal disease. However, should the man prove normal, it will next devolve on us to examine the wife for abnormalities of development or diseased conditions. The discovery of bilateral tubal disease or marked displacements will frequently solve the problem. Granting the tubes to be normal, examination of the uterus for misplacements and underdevelopment should be made. Occasionally the cervix is so misplaced that its opening is not immersed in seminal pool and the sperm dies before gaining admission to its alkaline secretions. It may be well to inspect the vagina for malformations. I have in mind a case of double vagina in which there existed a septum making two compartments; through one of these the menstrual fluid passed, through the other and larger compartment, which had no connection with the cervix, copulation had been performed. Strange as it may be, these anomalies often exist for years without detection.

The more recent study of the effect of the female genital secretions on the sperm has proved very enlightening and productive of good results in the treatment of sterility. Normal semen in the condom will remain motile for three or four hours at room temperature (70 F.). In the normal vagina their activity ceases in a few minutes to an hour, while in the cervical secretions they may be found active for as long as five days following coitus. In the uterine

canal living sperm have been recovered eight days after intercourse.

Reynolds, whose exhaustive studies of sterility have contributed much to our later knowledge, commends the ingenious method devised by Max Hühner for the study of the spermatozoa in their passage through the female canal. Hühner, after determining the normality of the sperm, examines the secretion in the vagina and cervix one, two and three hours after coitus for the purpose of watching the effect of these secretions on its motility. He follows with examinations on succeeding days to determine the viability of the sperm in the cervical and uterine secretions. For the purpose of following the semen into the uterine cavity he uses a special syringe to aspirate the desired specimens. If live sperm are found in a normal uterus several days after coitus stenosis of the tubes or ovarian disorder may exist for the correction of which laparotomy may be indicated. Living sperm found in the cervix and dead sperm in the uterus indicates a hostile condition of the endometrium or its secretions for which curettement is recommended. Obviously the repeated finding of semens in the uterine canal will eliminate the common flexions as the cause of sterility. Furthermore, it is easy to concede that in purulent or semi-purulent conditions of the tubes the proteolytic enzymes in the abnormal secretions may destroy the sperm at any or all portions of the genital tract.

Lespinasse mixes the uterine secretions with the sperm and studies them microscopically by the hanging drop method. If hostile secretions are found he prepares an anti-enzymotic serum and does artificial insemination.¹

Artificial fecundation in man has been practiced more extensively in Germany than elsewhere. Peter Müller states his attitude as follows: "Everything which in a mechanical or chemical way prevents migration of the sperm may serve as an indication for artificial fecundation." Dr. Herman Rohleder believes that of the 10 per cent. of childless marriages perhaps one tenth may be offered hope of benefit by this method. Statistics collected by Rohleder in 1910 showed 33 per cent. success in sixty-five cases. Bozzi had nine positive results in eleven cases. Injection of sperm directly into the uterine canal seem to have proven most successful. The moral right of the physician's interfering so extensively with the natural processes has been questioned. The Supreme Court of the German Empire in 1908 recognized

1. Since the writing of this paper Dr. Lespinasse has found preparations of anti-enzymotic sera impractical because of the difficulty of securing spermatozoic material.

the legitimacy of children so conceived to married couples when the semen of the husband was used. Rohleder justifies artificial fecundation as follows: "When all therapeutic means for the relief of the sterility of the woman have been tried fruitlessly and when the sterility is furthermore a misfortune in the marriage relation, the physician has consequently the right, even the duty, to recommend artificial fecundation for it is a moral, therapeutic means of cure just as any other necessary operation."

In our investigation we should first determine the presence of motil sperm, since its absence will at once locate the fault in the male. Condon specimens should be repeatedly studied to determine their shape and motility, also the quality of their centrosomes and chromatin bodies, for although the sperm show great activity, be apparently normal in size and shape, the absence of these vital characteristics of the cell body and nucleus will lessen the chances of conception. Should impregnation take place from such a sperm a parthogenetic individual with none of the characteristics of the father will result.

The absence of sperm in the condon does not always indicate obstruction or stricture in the genital passages as we have been wont to believe. Prof. Carlo Ceni experimentally demonstrated that prolonged cerebral excitation, not sufficient to produce nerve lesion, will stop spermatogenesis and if continued sufficiently long cause atrophy of testicular substance. It is my observation that in sexual neurasthenia we have a similar nerve exhaustion with many times associated atonicity of the sexual organs. It been my privilege recently to examine three apparently physically perfect men presenting azoöpermia. History of the life and habits in these cases was very similar, each having an occupation requiring considerable mental effort and being physically vigorous, they each included gymnastic work in the daily routine. One gave a history of mild gonorrhea which was not considered. Rest and tonics in one case was sufficient for a cure. Rest, tonics and treatment directed to the colliculus, prostate and seminal vesicles were sufficient to produce abundant sperm in the second case, while at the time the third case passed from observation a few inactive sperm were to be found.

Belfield in 1912 stated, that many sexually vigorous men have no spermatozoa. With the blocking of the efferent canals and consequent arrest of spermatogenesis, there is an increase of the interstitial tissues of the testicles. Since masculinity results from the internal secretions

produced by the interstitial cells sex vigor may be, and it is at times actually increased. Aspiration of the reti-testes in such cases shows no sperm. Since inflammatory closure of the sperm carrying ducts is so frequently the cause of asoöpermia, it is well to locate, if possible, the site of this stricture. A history of double epididymitis will direct our attention to the testicles, yet many times the closure may be at some point in the vas deferens or in the ejaculatory ducts. The appearance of argyrol or methylin blue in the posterior urethra previously injected into a lower segment of the vas will show the passage above the point of injection to be free. Should the diagnostic fluid not appear an injection should be made at a higher segment. If the passage above this prove free the obstruction is between the points of injection and resection of the vas is advisable. On the non-appearance of the fluid following injection at the point the vas enters the inguinal canal we may attempt catheterizing the ejaculatory ducts through the urethroscope; it sometimes happens that this dilatation will open the path.

Not being able to open the pelvic portion of the vas or ejaculatory ducts Lespinasse has devised what he calls his "sac operation." The procedure consists of opening the head of the epididymis and suturing a bag of rubber tissue or guttapercha around the aperture and closing the scrotum. After healing takes place he aspirates the sac and does artificial insemination. The objection may be raised that previous aspiration of the epididymis revealed no semen, complete arrest of spermatogenesis having occurred from the stricture, which is true. But this brilliant worker has shown that by permitting the testicular fluid to escape into a sac, spermatogenesis returns and aspirated specimens will show motile sperm after a few months.

If the vas from the reti-testes downward is found open the stricture exists somewhere in the epididymis. An anastomosis of the vas to the head of the reti-testis or vaso-epididymostomy should be attempted. The results from such manipulation have many times been far from successful. Yet there are urgent cases in which something must be done and better results are now being accomplished. In all the operative work above mentioned the strictest asepsis must be used since the slightest infection will vitiate the result.

It is my belief that another potent cause of sterility is the altered secretions of the prostate and seminal vesicles. In diseased conditions of these glands proteolytic enzymes are formed which are partially destructive, if not wholly so,

to the vigor of the sperm. Again in inflammatory conditions of these organs I have found of late a complete change from the normal alkaline reaction to a more or less acid condition. We know that semen remain active for hours in an alkaline medium, also we know that they rapidly die or become immobile in an acid medium. Is it not quite plausible that healthy sperm mixed in an abnormal acid male secretion and ejaculated into the normally acid vagina dies before it is given the opportunity to betake itself to the sheltering influence of the cervix and its benign alkaline mucus. Further more, the secretions from these inflamed glands always contain a gelatinous adhesive material to which the sperm become attached. Many times I have seen microscopically hundreds of sperm imprisoned in these masses thrashing themselves into exhaustion, but not advancing one micron in a forward direction. Normal prostatic and seminal fluid should be of the consistency of skimmed milk; but I have frequently observed the total expression from these glands to consist of this thick, gelatinous adhesive mass from which it would be a miracle for spermatozoa, no matter how active, to escape. Reynolds believes that the occasional group of pus cells he finds in the cervical secretions imprisoning the sperm are of enough hindrance to prevent or delay conception. It seems to the writer that the vast amount of thickened secretions in only mildly inflamed prostates may become quite a factor in preventing the sperm from reaching the cervix or uterine canal.

Accompanying and following prolonged inflammation of the sex glands there arise the atonic conditions or impotence as a considerable factor in sterility. Spermatorrhea, imperfect or absent erections are the result of the loss of tone in the perineal muscles and the spermatic sphincters. As the result of such conditions in the male it so happens that the semen is not deposited within or near the uterine os. In extreme cases periculate ejaculation occurs before intromission is gained. Again there sometimes exist epispadias or hypospadias which prevent deposit of the sperm near the cervical canal. Artificial fecundation has been done in such cases. However, lest emergency exist, it would seem advisable to correct the above conditions since the means are nearly always available and successful results are gained in a vast majority of cases.

Some years ago my attention was directed to inflammatory conditions of the seminal vesicles and prostate as causes of sterility by the fact that the majority of the patients well treated

for such before marriage reported conception as having taken place within the first few months of connubial life. It has been my custom to examine thoroughly in genital fluids of a candidate for marriage for the presence of pus and bacteria. Naturally permission to marry was withheld until we were reasonably certain of the eradication of bacteria and could find not more than an occasional leukocyte. It so happened that when at our accidental meetings these patients would announce their early paternity the thought occurred that the treatment directed to the freeing of their seminal canals from pus may have increased their potency. With this in mind it became the custom to examine the character of the secretions of patients presenting themselves because of sterility. When thickened secretions imprisoning many spermatozoa were found it became evident that here was a plausible cause. The treatment to be adopted is the same as in infected cases, that of emptying by massage of these organs, their abnormal contents and by bringing new blood supply to the parts thus absorbing the inflammatory exudate. This soon causes the fluids to return to the normal skimmed milk consistency in which alkaline media we already know the sperm flourishes. Prostatic massage and seminal vesicle stripping have been used for years. Some surgeons have discarded it preferring operative means to bring about results. Yet it stands preeminent as a method of cure in most of these inflammatory conditions and is a means of cure to which most patients will readily consent. Likewise, since massage with endoscopic applications to the coliculus or verumontanum will largely relieve the atonic conditions, it should be a considerable factor when treatment of certain classes of sterility is attempted. However, there are seminal vesicles which because of their tortuosity cannot be emptied readily of their contents. For such cases collargol lavage through vasotomy by Dr. Belfield or the operation of seminal-vesiculotomy and drainage by Dr. Eugene Fuller offers much toward a cure.

In conclusion permit me to say that the above is a mere outline of some of the later important work done for the cure of this disability. A full exposition of all of the theories, experiments and methods used in the diagnosis and cure of this condition would fill a large volume. I have tried to mention only those which seem to give the best promise of good results. Some of the methods are hardly out of the experimental stage and may be discarded. The operations for the relief of the blocked seminal ducts are recommended by some and condemned as use-

less by others, probably in the light of their results. However, with greater application to the study of operative technic more investigators are reporting success. I would especially recommend the study of abnormal secretions which have proven so large a factor in sterility and which is lending itself so readily to correction. Since the discovery of hostile secretions and their corrections success has accompanied attempts at artificial fecundation. Authorities do not agree on statistics as to relative frequency of sterility in the sexes, however, the best obtainable seem to indicate an even division. Lespinasse claims that twenty-five per cent. of the men of sterile couples have no demonstrable sperm. Reliable statistics will not be secured until investigators adopt some reasonable method of tabulation. As a field of investigation and discovery sterility offers vast opportunities. No doubt, many of the richest "finds" are still to be made. The work is fascinating, carrying us as it does to the very foundations of that greatest of all mysteries—Life. Likewise, it is a field of endeavor productive of much good, bringing happiness into the lives of lonely couples; assisting man to observe the injunction of the Great Giver of Life.

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A BACTERIOLOGICAL STUDY OF THE RECENT EPIDEMIC OF INFECTION OF THE RESPIRATORY TRACT

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INDIANAPOLIS

During the months of December, 1915, and January, 1916, there occurred in the Northern and Central States an epidemic of naso-pharyngitis which was of such extent and severity as to temporarily incapacitate a large percentage of the population. The epidemic made its ap-

pearance first in the Eastern portion of the United States and spread rapidly westward appearing in the lake region shortly after its reported occurrence in the eastern cities. An epidemic of similar kind was the so-called "septic sore throat" which spread through this section in the winter of 1911-12, and again in 1912-13. That infection was found to be due to streptococci which were variously described as hemolytic and non-hemolytic and the spread was in most cases traced to an infected milk supply. That epidemic differed from the recent one in that it was more severe in character, the mortality somewhat higher, the percentage of morbidity being less. It also differed in that it was apparently milk-borne and hence confined mainly to large cities, while the epidemic herein described was of such wide spread distribution through both urban and rural districts that infected milk, water or food supply seems inadequate to account for its spread.

It is not apparent why this infection should have been so generally designated as "grip." That term is used synonymously with influenza and is properly applied only to infections with *Bacillus influenzae*. It is probable that the rapid spread and high percentage of morbidity, together with some resemblance in its clinical features to past epidemics of influenza are in some measure responsible for the use of the term "grip" in this recent epidemic. Desire for a convenient designation with which to satisfy the laity is probably partly responsible for this loose application of terms at the expense of accuracy.

Thus far comparatively few observations have been published concerning the cause of the recent epidemic. Mathers of Chicago, in a study of 24 cases (*Journal A. M. A.*, Vol. LXV, Jan. 1, p. 16) found in 17 of these a hemolytic streptococcus which he regards as the causative agent. Rucker of Philadelphia reports 20 cases (*N. Y. Med Jour.*, ciii, Feb. 12, p. 294) from each of which he cultivated a non-hemolytic streptococcus. In direct smears from the sputa of these cases he demonstrated pneumococci and influenza bacilli twice each.

We undertook the study of cases occurring in the dispensary and at the city hospitals with the hope of learning something concerning the causation of the infection. These cases were typical of those occurring in this epidemic. The onset was with severe naso-pharyngitis sometimes involving the trachea and bronchi. There were fever, pain in the limbs and joints, malaise and varying degrees of prostration. Recovery in uncomplicated cases followed in from one to

three weeks. Complicating sequellae were quite common. Bacteriological examinations were made of the nasal or pharyngeal secretions of 17 patients both by direct examination and by cultures. The sputa were collected in sterile tubes, washed with sterile salt solution to remove as many as possible of the contaminating organisms from the mouth, and streaked on blood agar plates. In from one to three days there appeared on the plates fine clear colonies of streptococci which caused a white precipitation in serum glucose agar, and a distinctly greenish color but no hemolysis. On several plates staphylococci appeared and occasional colonies of bacilli such as are common in the mouth. These were regarded as accidental contaminations of the mucous as discharged from the mouth, since they occurred only occasionally and in small numbers. Direct examination of the sputa revealed streptococci in 12 of the 17 cases. These organisms were small and occurred in short chains and often in pairs. The colonies from the blood plates were transferred in pure culture to blood agar slants, litmus milk and other media for more detailed observation of cultural characteristics. No organism resembling the *Bacillus influenzae* appeared in any of the cultures or direct examinations, though care was taken to use media and methods suitable for growing this organism.

Sera from four of the cases after recovery were tested for specific agglutinins against the organisms obtained from those particular cases, but no agglutination was obtained. Further attempt to discover whether specific antibodies had been formed against these organisms was made by injecting intracutaneously in five of the patients very small quantities of killed suspensions of the organisms obtained both from their own respiratory tracts, and from those of others. In from three to six hours after receiving the injections each of the five patients who had been infected gave a reaction of hyperemia about the point of injection whether the organism used was the one obtained from the respiratory tract of that particular individual or not. As controls 3 persons who had not been infected received the intracutaneous injection. Only one gave a reaction. This reaction in infected patients is interpreted to mean that there had been formed as a result of the infection specific antibodies against this organism. The occurrence of a reaction in one who had not been infected might be explained on the ground that the individual had already in his blood specific antibodies which gave him a natural immunity to the infection.

A marked characteristic of the respiratory infections under consideration was their tendency to develop serious complications. Several cases under observation at the City Hospital developed broncho-pneumonia. One such case which terminated fatally came to autopsy with marked broncho-pneumonia of both lungs, and a fibrino-purulent pleuritis. A streptococcus such as above described was isolated in pure culture from the bronchial exudate.

One case of meningitis in a child of 8 years of age gave a history of severe naso-pharyngitis a few days previous to the attack. The spinal fluid contained many Gram positive diplococci, which on culture had the same characteristics as those obtained from the cases above described.

In one family there were four children all of whom developed a severe naso-pharyngitis at about the same time. Three of these developed middle-ear infection and two developed mastoid infection. The same streptococcus was obtained in pure culture from each of the three.

One of the 17 cases from whom cultures were made from the naso-pharyngeal discharge, developed an acute infection of all the accessory sinuses of the face. Those whose practice brings them in touch with cases of this character report numbers of similar sequellae.

The heart seemed particularly subject to serious involvement in these infections. Our attention has been called repeatedly to cases in which either an endocarditis or a severe myocarditis developed during or following these acute respiratory infections. We have held autopsy on three cases in which most marked myocarditis was found, the heart muscle being so soft that a finger could be thrust almost without resistance through the ventricular walls. Each of these had recently been infected with the so-called grip and had suddenly developed severe heart symptoms. One patient, a boy 11 years old, developed an acute myocarditis following an attack of naso-pharyngitis. This was immediately followed by severe meningeal symptoms and much albumin and renal cells in the urine. The case terminated fatally and postmortem examination showed a marked vegetative endocarditis, having a friable, verrucose vegetation 1.5 cm. across on the anterior curtain of the mitral valve. There were numerous small abscesses in the cerebral cortex and multiple infarctions of both spleen and kidneys. These infarcted areas were breaking down in the centers. Direct examination microscopically showed immense numbers of streptococci in the

fluid from the centers of the infarcted areas. A pure culture of streptococcus similar to those above described was obtained from the centers of the infarcted areas.

SUMMARY

Cultures from the naso-pharyngeal mucous of patients suffering from the so-called "grip" in no case resulted in finding the influenza bacillus but uniformly grew a green-producing, non-hemolytic streptococcus.

No agglutinins were demonstrable in the blood of patients having, or recovering from, the infection.

In five patients having had the infection the skin reaction was positive, indicating the presence of so-called antibodies in the patient's serum.

The streptococcus present in the infection seemed of relatively high virulence, and had a marked tendency to produce complications by involving parts other than the respiratory tract.

We obtained no evidence as to the manner of spread, but it is probable it was by direct transmission from person to person rather than by such media as water, milk or food.

SOME CONSIDERATIONS IN PELVIC FLOOR WORK IN WOMEN

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How far back in history the weakness of the pelvic floor has been recognized as a definite pathological entity cannot be said. For many years symptoms of the disease were treated empirically with little idea of the underlying causation. The first light, as shown by surgical procedure, was in 1850 when Amussat cauterized the posterior surface of the cervix and adjacent vaginal wall for retroversion of the uterus. Up to the year 1881 many minor operations were performed for this and other pelvic symptoms with indifferent results. It was at this time that Alexander announced his operation on the round ligament. A definite step forward, because it did give rather definite results on well selected cases. This operation was popular for many years, and is in use, with many modifications, up to the present time. Following this was the period when many operations were perfected for shortening the round ligament: up to date there have been devised in

all over 100 operations to correct one or more of the symptoms of pelvic floor weakness in women. Strange to relate, over fifty of these were devised to shorten the round ligament, which number is greatly out of proportion with other pelvic procedures.

This paper is not written with the object of bringing forth a new operative procedure (as there seem to be quite a plenty, if properly suited to the case, to correct nearly every given condition), but rather to go over the broad field of surgical gynecology and present a few facts from this much-discussed, ever interesting and omnipresent subject to which we offer a few ideas and thus attempt to gain some vantage points in our operative work on pelvic floor weakness.

In discussing the essential anatomy and physiology of the pelvic floor from the standpoint of pelvic floor weakness, it is quite necessary to be mindful of the pelvic organs, since they are those points which often furnish us the most prominent symptoms of a primary weakness in the pelvic floor, although they are not at all a part of it. The pelvic floor is made up of and supported by muscles and fascia fastened to the bony pelvis; the levator ani and transversus perinei are the most important muscles, the aponeurosis covering these and the triangular ligament are the most important fascia. These stretch from the surrounding bony pelvis over the pelvic outlet and form a hammock, so to speak, on which are the organs of generation and through which pass the rectum, urethra and vagina. The bladder and uterus are just above this hammock and are usually the first organs to be misplaced or to have their functions altered, so it is not now, and has not in the past been, uncommon for gynecologists to look to the uterus, bladder or rectum for their points of favorite selection for operative procedure.

No part of the intestinal tract is held so firmly as is that part of the rectum passing through the pelvic support. Its anterior wall is separated from the posterior vaginal walls by important muscular structures which sustain these walls and are a part of the supporting underwork of the pelvic floor. The uterus is usually described as lying anteriorly over the bladder, its long axis being at a right angle to the long axis of the vagina. THE FUNDUS OF THE UTERUS IS ALWAYS MOVABLE IN HEALTH, WHILE THE CERVIX IS BEST DESCRIBED AS FIXED IN POSITION. The fundus is given poise by the round ligaments anteriorly, the broad ligaments laterally and the attachment to the cervix posteriorly. The ligaments of the fundus are com-

posed of elastic connective tissue and a few muscle fibers, their make up being such that the freedom of the uterus may be quite unhampered in its movements and functions. Its ligaments must be able to allow it poise, when many times its usual size, or to give corrective traction when pushed to one side by a distended rectum or upward by a full bladder; these are their physiologic adaptability, since such excursions of the fundus are normal and occur frequently.

The broad ligaments are the most important ligamentary structures of the uterus.

THE POSITION OF THE FUNDUS MAY BE FOUND EXTENDING FORWARD OR BACKWARD OR IN ANY INTERMEDIATE POSITION, WITHOUT PRODUCING SYMPTOMS. Its position can no more be described than can that of the normal stomach. Like the stomach, it has but one fixed portion.

The bladder lies in the anterior portion of the pelvis and has a definite fixed base which is often lacerated or stretched in labor. The anterior vaginal wall which is attached to the posterior bladder wall by interposing fascia is often the location of pathologic conditions. All of the supporting boundaries are a part of the pelvic floor. The cervix is attached to the bladder anteriorly, the broad ligaments and levator ani muscle laterally, and posteriorly in addition to levator ani muscle, the uterosacral ligaments. It is well that the surgeon keep in mind the cervix as a fixed organ and the fundus as a movable one; his work will be improved thereby.

A pelvic floor that has been damaged by one of the many different forces that act upon it, such as labor, bodily weakness, constipation, trauma from heavy lifting or falling, striking on the perineum, intercurrent illness and many other conditions that may affect it, usually has a weakened, stretched, lacerated or atonic levator ani muscle; what is said of this muscle may also be said of the transversus perinei and all of the pelvic fascia covering and near these muscles; such conditions cause any number of secondary systemic and organic symptoms. IT IS NOT UNCOMMON FOR US TO THINK OF ORGANIC SYMPTOMS OF THE PELVIS ALONE AND FORGET THE CHANGES THAT MAY OCCUR IN OTHER ORGANS FROM THE SAME CAUSATIVE FACTORS THAT PRODUCE A PROLAPSED UTERUS OR A DAMAGED BLADDER AND RECTUM; it is quite a common thing to see a damaged ureter through its overstretching and as a result hydronephrosis, from the kidney's inability to get proper drainage through such a ureter, or to see a gastropnoia and frequently a visceroptosis, without speaking of the general nervous symp-

toms that are associated with such disorders and distressing both to patient and doctor. The stretching of the uterine ligaments are but secondary conditions that arise and should be considered, but thought of most often in conjunction with other more important disorders.

All are perfectly familiar with the usual symptoms of weak pelvic floors. I wish to emphasize a few important points which are apt to be more or less overlooked.

The usual signs and symptoms of pelvic floor weakness with all of the pathologic conditions may be confounded with the equally significant findings of visceroptosis and the symptoms of nervousness.

The dragging abdominal and pelvic sensations with backache and the usual extreme nervous condition found in not a few of weak pelvic floor cases have not convinced me that there are not many other abdominal and constitutional conditions which play an important rôle, nor do my observations on postoperative cases for pelvic floor disorders tend to convince me that important improvement follows a complete repair of the pelvic floor and the position of the organs in the pelvis in cases as have the aforesaid complications.

This hint I suggest because of complicating conditions producing the same symptoms and urge that these be taken into consideration in our prognosis and treatment. Nephrotosis and prolapse of the ovaries producing like symptoms and common complications should be dealt with surgically.

Too frequently is a retroverted uterus blamed for the symptoms of visceroptosis or a ptosis of one or more organs in the abdomen.

Bovee has said, "I am convinced that uncomplicated uterine retroversion has no symptoms," and other authorities agree. It is well, then, that we intently look for complications in all cases.

In considering the surgical treatment of weakness of the pelvic floor in women, it is scarcely safe to look no further than the pelvic floor or the condition and position of organs of the pelvis on which to base a prognosis and treatment. As I have just stated, nervousness and certain other symptoms common in such conditions are too apt to make us overlook conditions which produce the same symptoms and contribute to the patient's ill health. An operation may be done on the pelvic floor or organs when these are but one or two of the pathologic conditions found that produce the symptom-complex of the disease.

How many times have perineum and uterine displacements been done when there were prolapsed stomach, kidneys, intestines, liver and a general visceroptosis, and the patient complains after operation as she did before?

Intra-abdominal pressure or the lack of it seems to be a worn-out medical misnomer. The presence or absence of it is due to the tone of abdominal muscles and that in turn to many conditions, such as trauma, anemia, general debility with its causes and a score of other things. We wish, therefore, to urge more general consideration of all conditions present before assuming that pelvic work is going to cure our patient.

The ultimate outcome from an operation should be judged not from the most perfect operation alone, but from a perfect understanding and consideration of the pathologic state of the patient.

IN CONSIDERING THE RESTORATION OF THE PELVIC FLOOR NO PROCEDURE IS COMPLETE WITHOUT RESTORING, AS NEARLY AS CAN BE, ALL OF ITS PARTS TO THEIR NORMAL STATE, BE IT PERINEUM, RECTUM OR UTERUS WITH ITS APPENDAGES. Any one of these conditions neglected modifies the chances for complete success. It becomes, therefore, necessary to have surgical measures to include all parts and organs of the pelvis found within the realm of its helpfulness. Surgical work should be directed to perineal and bladder support and to the strengthening of the lower pole of the uterus; as long as these conditions are maintained no prolapse or distorted pelvic organs need be found in uncomplicated cases.

As has been stated in this paper before, there are some over fifty operations on the round ligament alone, with new ones being constantly devised, which does not speak well for round ligament operations up to date. The future operation on them in most cases is apt to be no other than to leave them alone. The round ligaments are thinner and less strong in their anterior portion, and undoubtedly that is the portion that should be strengthened in the process of shortening, and with our present knowledge of surgery it seems that they must be shortened at times in order to relieve symptoms. There are many methods for so doing; all of them have some objection, yet to me the new Kelly operation seems to fill the place best. In the Kelly method the anterior portion of the ligament is plicated and stitched with an unabsorbable suture to the under surface of the aponeurosis near the internal ring without opening the peritoneum. The loops of plications

unite by adhesions and the suture holds the uterus forward and the plications in apposition until the adhesions are such as will give the desired support.

Care should be taken not to make the round ligament too short because of a painful convalescence; in the end they should not be so short as to retard the normal mobility of the uterus. Often it has been my conviction that patients suffer for months with short round ligaments following an operation on them. As has been suggested in this paper, they should not be compelled to bind the uterus in an anterior position, but to somewhat retard its lateral and backward excursion.

In cases of uterine prolapse or retroversion where the round ligaments are shortened and are compelled thereby to support the uterus, the uterus acting as a lever, the round ligaments become the supporting power, the bladder the fulcrum and the weight above on the cervix. It is certainly not long without perineal support, and perhaps with it, that the round ligaments lengthen under constant traction, as is one of their inherent capabilities, and the uterine position has changed from anteversion to retroversion. It is my belief that round ligaments and perineal operations do not yet solve the problem of uterine support and stability. The support must come from those parts which contribute to the stability and support of the cervix and lower pole of the uterus. The uterosacral ligaments, bladder and vaginal walls and their attachments have to do with this stability. Not uncommonly it is entirely the lengthening of the uterosacral ligaments. It becomes necessary in all cases of prolapse and in many retroversions to shorten the uterosacral ligaments and thus get the cervical rigidity which is normal. The uterosacral ligaments may be shortened by different methods, but again the Kelly-Neal method of plication of these ligaments and fastening by unabsorbable suture to the cervical portion of the uterus seems best. The technic of these operations it is not the object of this paper to take up; it may be read in one or more textbooks. Great care should be observed in plicating these ligaments that the ureters which should remain free from the plication be not injured.

Perineal restorations are of prime importance; it is not necessary nor shall we dwell on that phase of it. There are, as in other procedures, many and many a method of doing a perineorrhaphy. We wish not to name a method or methods, but to call attention to a few rocks and pitfalls as well as to suggest possible routes about them.

The suturing of muscles together has been called to halt in surgery of many parts of the human anatomy, yet the gynecologist still exists who persists in denuding the muscle fibers of their fascia and suturing bare muscle fibers to bare muscle fibers, expecting the sutures to hold, even without penetrating intentionally the muscular capsule and the fascia surrounding it. Muscle fibers sutured to muscle fibers soon are severed by the stitch if the slightest pressure is brought to bear on the stitches. Sutures placed in muscles of the perineum are under quite a severe tension and sutures have cut out while they were being put in, or soon after. Quite fortunately, only a few gynecologists persist in this pernicious method, but suture the fascia covered bands in one stitch to the opposite side with the same stitch. The fascia acts as a buffer between the stitches and muscle bands, and in that way are scarcely cut through. The uniting of the abdominal wall in abdominal surgery by a single row of through-and-through sutures has passed and given way to more careful uniting of the different parts or layers with absorbable sutures. We have reason to believe and good authority from prominent gynecologists that perineal work should be closed as carefully as the abdomen and by buried sutures.

The question of protecting perineal sutures from vaginal discharge which may cause them to absorb or slough out is best solved by the Watkins operation when that is well suited to the case. The sutures at least should be protected with as nearly an unbroken vaginal mucous membrane as is possible. In this way the sutures will be subject to no more infection and irritation than in other parts of the anatomy.

Cystocele operations should be undertaken, though the anterior vaginal wall has fewer muscles to utilize or other to support than the posterior bladder wall, though this, as with all other prolapsed organs, should be restored as nearly as possible to normal position, care being taken that a long scar in the vaginal mucous membrane be not of such dimensions as to contract and drag on the cervix.

SUMMARY

I wish to summarize my views as follows:

1. That pelvic floor work of improved method is not relieving as many of our patients as it should because of the neglect of frequent complications producing like symptoms.
2. The round ligaments retard motion but do not hold the uterus in a forward position.

3. The lower pole of the uterus must be mobilized in prolapsus uteri and retroversion.

4. That no operation should be done on the child-bearing woman that would retard the normal motion of that organ.

5. Perineal muscles should be stitched only with their fascia covering included in the stitch.

6. That perineal sutures should be of absorbable material and protected as far as possible from vaginal discharges by an unbroken vaginal mucous membrane.

DISCUSSION

DR. G. G. ECKHART, Marion: After listening to this worthy paper, I am reminded of a statement made by a prominent surgeon of this country concerning appendicitis. He said that there was little reason for discussing the subject, as every one knew all about it. In spite of so much knowledge, 10 per cent. still die from the disease.

And so it is or may be said of the subject under consideration; but if we were to study the partial and total failures that we meet with in our own practice and those of others we surely and most sincerely cannot say that we are masters of the subject.

I believe we are just on the eve of a thorough understanding of the underlying principles governing success in pelvic surgery. For instance, we all can remember that just a short time ago buried sutures were not used and the mucous membrane was sacrificed and the resulting scar left ever as a menace. This apparently new procedure, without mentioning the many others and perhaps more valuable, is conclusive evidence that we have not stood still, but are ever seeking to obtain a lower percentage of failures. The vast majority of failures come, not from faulty technic, but from a neglect of a thorough survey of the anatomy at fault.

It is superfluous to say that where so many operations have been devised that we as yet are still in darkness. Every prominent operator has his name attached to some particular method of operative technic, and as a rule we follow the various or combined methods. This is all wrong and, as the essayist has said, a thorough knowledge of the anatomy and physiology is most important. After this a thorough survey of the two floors of the pelvis should be ascertained: the age of the patient; her height; whether the intra-abdominal pressure is marked; the presence or absence of visceroptosis and whether associated with a general weakness; all these things should be taken into consideration.

Crossen briefly states that the levator-ani muscle and the perineal and rectal fascia make the lower floor, and the uterosacral and uteropubic fascia and the uterus and its attachments

make the upper floor. If this be true, then shortening the round ligaments alone for retro-displacement will not suffice.

If the uterus has been heavy over a long period of time, backward displaced, shortening the round ligaments and rest in bed for the increased weight over a long period of time may give complete relief. No doubt the largest percentage of failures in pelvic floor work are reported in cases where future pregnancy is to be reckoned with. My failures are in this class, while I have my first case to report where future pregnancy is not considered.

In regard to the relaxation of the perineum—and, by the way, the word relaxation is much the better term because the common term laceration means nothing; furthermore, it makes much ill will among the profession and reflects much discredit on the family physician—we all agree that the essential feature is to bring the levator-ani muscle together with its surrounding and overlying fascia, great care being taken not to tie the stitches too tight.

It was but a short time ago it seems when the operator that could make the prettiest form of denudation had the far better result in his grasp. But now, how different. Does one think of making a troublesome scar always to give trouble, without mentioning the protection to the underlying fascia and muscle and thereby clinching the greatest success that has ever been obtained in this field?

DR. GOETHE LINK, Indianapolis: Prevention is better than cure. If compensation for obstetrics were better, physicians could spend more time in making deliveries and could more often use professional assistants. There would then be fewer bad tears. A slow delivery accurately controlled by a skilled anesthetist is the best protection for a perineum.

The perineum once torn, repair should not be the indifferent gathering up of tissues in a few sweeping silkworm-gut stitches placed with the aid of poor light and on a sagging bed, as it often is. A torn perineum can be made almost as good as new at the primary repair, but to make it so is an operation requiring skilful work, good assistance and favorable surroundings.

We have too many named operations on the perineum and not enough anatomy. If a gynecologist understands the intricate anatomy of the perineum he will get the several tissues together properly whether he knows the name of an operation or not. All tears are not alike, and yet we frequently see some operators making every perineal repair conform to one set type of operation.

There is still much false teaching due to defective knowledge of anatomy. For example, the instruction to cut laterally in episiotomy

is wrong. Nothing could be better devised to ruin the pelvic floor. Lateral tears are not sufficiently feared, but a tear down the median line is regarded with horror. The lateral tear severs the supporting muscles transversely, the median tear merely splits them. A patient with an old median tear extending through both sphincters and up the vagina almost to the cervix will have uterus and bladder in normal position, while one with a moderate lateral tear on each side will have prolapse of the entire pelvic contents. The median tear, however severe, properly repaired, makes the patient sound again. The patient with lateral tears and extensive prolapsus can never be restored to her normal condition.

Perineorrhaphy is often lightly considered, and is one of the operations frequently done by the family physician along with circumcisions and curettements. I believe that most of the gynecologists here will agree with me that the proper restoration of the pelvic floor frequently requires all of their skill and mechanical ingenuity.

I am pleased to hear Dr. Baker dwell on the importance of the sacro-uterine ligaments. I often shorten them because they are often stretched. Many operators disregard them entirely.

After a foundation has been placed under the pelvic contents by a good perineal repair, the shortening of those ligaments which are elongated will usually leave the nearest approach to the normal that it is possible to have. Ventrofixation or suspension I seldom employ. All our efforts should be toward the restoration of normal anatomy and one pathologic condition should not be replaced by another.

HEALTH insurance is very apt to come up for consideration by various state legislatures this coming winter. It is very evident that the medical profession is to play an important part in the administration of health insurance wherever adopted. Therefore, it is incumbent upon medical men to acquaint themselves with all of the known facts pertaining to health insurance as conducted in some of the European countries. The voluminous report of the Committee on Social Insurance of the American Medical Association, published in the *Journal of the A. M. A.*, June 17, 1916, will prove of interest and value as a compilation of what has been done abroad, and of the present situation in the United States. It is essential that the profession should clearly understand the various social insurance laws that are proposed, and to that end a careful perusal of the Committee's report is recommended.

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EDITORIALS

THE EPIDEMIC OF INFANTILE
PARALYSIS

Every physician in this State already has become aware, no doubt, of the epidemic of poliomyelitis, or infantile paralysis as it is popularly known, which is raging in New York City. Great care has been taken to prevent the spread of the disease to other centers, and the efforts of health officials so far have been very successful. Although some cases have occurred in other places the epidemic has not spread outside of the city of New York.

According to a statement issued recently by the United States Public Health Service the means by which to control the spread of the disease is to break the chain of infection between persons harboring the specific germs. It is now known that poliomyelitis in all probability is caused by a very minute organism found in the nasal, buccal, and intestinal discharges of those who have the disease or those who carry the germ without contracting infantile paralysis. If the germ can be prevented from being transmitted from the infected to uninfected persons the disease will die out.

The danger of importing the disease from New York City into other communities is a real one, and it is only by exercising the most rigid precautions that the danger can be averted. The control of the present epidemic is being taken care of by the City, State and Federal health authorities, all working together. These factors have organized to quarantine and care for affected persons, prescribe sanitary measures and limit the travel of persons as much as necessary in order to protect the country at large from the infection.

Individuals and communities can do much toward their own protection and to them the following advice is offered: Promiscuous ex-

pectoration should be controlled. The common drinking cup should be abolished. Rigid cleanliness of glasses and utensils at soda fountains, in saloons, and other public places should be enforced. Flies, roaches and vermin should be eliminated. Strict cleanliness of streets, yards, and alleys must be maintained. All garbage and waste must be properly cared for, collected at regular frequent intervals, and properly disposed of. All food supplies, especially milk and other perishable food products, must be carefully protected. Digestive troubles of children due to ingestion of food of questionable quality should be attended to without delay, for such disturbances tend to lower the resistance of the children. The grouping of children in infected localities is to be forbidden and prevented.

The greatest living authority on this disease, Dr. Simon Flexner, of the Rockefeller Institute, states that there is at present "no safe method of preventive inoculation or vaccination, and no practicable method of specific treatment." After the disease has set in, it is cured spontaneously by a process of immunization in the same way that any other infectious disease is cured without the aid of specific remedies. Without doubt the most important problem that this disease presents now to medical men is that of prevention, and in the present state of our knowledge the prevention of infantile paralysis will have to be accomplished through general sanitary measures.

HAY-FEVER

To victims of hay-fever the disease is thought to be one of the most dreadful scourges affecting the human race. To physicians it is an obscure disease occurring twice a year, in the Spring and in the Fall. Most of the victims suffer the latter form, characterized as the autumnal type of hay-fever.

A great deal of scientific investigation has been conducted, especially within the past few years, to determine the etiology and the nature of the autumnal form of disease. Nothing very definite has been established, but our knowledge is increasing little by little. The view held most widely at present is that hay-fever is the result of a peculiar sensitization of the individual to the pollen of certain plants, more particularly

rag-weed and golden-rod. Various other forms of plant life no doubt may be included in the list, but these two are the most prominent so far as is known at present. The sensitization of individuals to these substances may be compared in some ways to the sensitization of individuals to certain foods, to proteins of various kinds, to odors, and so on. Each of the excitant substances produces in the allergic or sensitized person a specific reaction. Thus the pollen referred to produces the clinical phenomena which we recognize as hay-fever. Why it is that certain persons are susceptible while others are immune is not known. A popular view is that susceptible individuals lack something in their nasal mucosa that immunes have which protects them from the action of the pollen. Such an explanation, however, does not explain. It assumes a very vague and indefinite theory for which there is no basis of fact as yet. Perhaps some day as our knowledge increases we may fully understand some of the aspects of this disease that are so obscure now.

Some progress has been made within the past year or two in regard to the treatment of hay-fever. Special vaccines prepared from the pollen of rag-weed and golden-rod are now on the market. The idea in using these vaccines is to increase the immunity of the susceptible individual in just the same way as one's immunity is increased by means of bacterial vaccines or emulsions. The idea, therefore, is rational, provided the assumption that hay-fever is caused by the pollen of these plants proves to be true. Since this new method of treating hay-fever is based on an idea that seems to be logical and reasonable it deserves a fair trial. It has been applied already to a certain extent during the past year, and on the whole many favorable results are announced. Certainly that much is in its favor. The treatment is essentially prophylactic. It is said to be more efficacious in preventing the onset of the disease than in modifying its course after it has set in, although it is said to have some value in that respect also. "Experience is the best teacher," however, and experience will soon tell us whether or not this new method of treating hay-fever is really all that is claimed for it.

THE SCIENTIFIC EXHIBIT OF THE A. M. A.

Those who visited the Scientific Exhibit of the American Medical Association at the Detroit session should have been impressed with

the fact that the enterprise reflects great credit upon the Indiana medical profession. In the first place the Scientific Exhibit is the outgrowth of an exhibit made by the Indiana State Medical Association many years ago under the management of Dr. Frank B. Wynn. That exhibit attracted so much attention and was considered such a valuable educational feature that the A. M. A. decided to continue the enterprise under its own support, and Dr. Wynn was selected as director, a position he has continued to fill ever since. As the Reference Committee on Scientific Exhibit has well said in quoting the report of the Committee of the previous year, "Too much praise cannot be given to the untiring energy and efficiency of Dr. Frank B. Wynn, Chairman of the Committee on Scientific Exhibit, and we desire to record our opinion that the Association owes him a debt of gratitude."

Indiana men are proud of the fact that one of their number has been instrumental in founding and maintaining a feature of the Association that is of such great importance from an educational and scientific point of view, and they regret that Dr. Wynn feels that after seventeen years of very active service in founding and developing the Scientific Exhibit of the American Medical Association he is entitled to retire and be relieved of the labor and responsibility connected with the enterprise. While it has been said that no man is so valuable that he cannot be replaced, yet we believe that the Association will hunt a long time before one is found who is as capable and willing to make the Scientific Exhibit the valuable feature it is in the progressive work of the Association.

But we especially desire to call attention to the part that the Indiana State Medical Association continues to play in keeping up the high standard of excellence of the Scientific Exhibit of the National Association. At the Detroit session the Indiana exhibit was especially noteworthy and received favorable comment on every hand. The Committee on Awards thought so well of the Indiana exhibit that they granted it a certificate of honor. All in all, therefore, the Indiana medical profession should be proud of the fact that it not only is responsible for pioneer work in establishing the exhibit for the National Association, but has continued to support the feature in a manner that does great credit to the medical men of the state.

RILEY

In the death of James Whitcomb Riley, which occurred in Indianapolis July 22, the state loses one of its famous men and the world one of its beloved poets.

Indiana is noted for having produced men who have become famous in literature, art, science, statesmanship, and business, but she has never produced a man other than Riley who has become enshrined in the hearts of English speaking people for all time to come.

Riley was a Hoosier poet in the most comprehensive sense. Nearly all his life was spent within the borders of Indiana, and his education was intimate contact with every phase of Hoosier life. His writings showed that he copied no one, but wrote from the heart; and he put into his poems all the kindly sympathy and genuine pathos that his peculiar genius for thought and expression made possible. No poet has been so free from artificiality, and that was one of the secrets of his wonderful ability to interpret the common life and to make his writings read by common people. He thought simply, talked simply, and lived simply, like all great men. He loved nothing in life as well as children, and his most cherished memories were those of his own childhood. It is not surprising that children loved him for he had a peculiar faculty of interpreting childish notions, and his verses bring back to the mature mind the illusions of early life and awaken vivid recollections of joys long forgotten. "Out to Old Aunt Mary's," "Little Orphan Annie," "When the Frost is on the Pumpkin," "An Old Sweetheart of Mine," and many other familiar poems may not be considered by the critics as belonging to the highest realms of poetry, but there is a sentiment running through them which makes an inimitable appeal to plain people who can understand what he wrote, and who have given him an honorable place as the poet of the whole American people. He has put the hopes, emotions, and aspirations of ordinary folks into verse, and they have repaid him with unbounded loyalty and affection.

Riley wrote about familiar things, but familiar things seen with the poet's vision and described with the poet's feelings, cease to be common things, and Riley was able to make things of the farm and village significant of human destiny. His conception of the need of poetry about common things and for common people is well illustrated in the preface of his book entitled, "Poems Here at Home."

The Poems here at Home!—Who'll write 'em down,
Jes' as they air—in Country and in Town?—
Sowed thick as clods is 'crost the fields and lanes,
Er these—'ere little hop-toads when it rains!—
Who'll "voice" 'em? as I heerd a feller say
'At speechified on Freedom, t' other day.
And soared the Eagle tel, it 'peared to me
She wasn't bigger 'n a bumble-bee.

Who'll sort 'em out and set 'em down, says I
'At 's got a stiddy hand enough to try
To do 'em jestic 'thout a-foolin' some,
And headin' facts off when they want to come?—
Who's got the lovin' eye, and heart, and brain
To recko'nize 'at nothin's made in vain—
'At the Good Bein' made the bees and birds
And brutes first choice, and us-folks afterwards?

What We want, as I sense it, in the line
O' poetry is somepin' Yours and Mine—
Somepin' with live-stock in it, and out-doors
And old crick-bottoms, snags, and sycamores:
Putt weeds in—pizenvines, and underbresh,
As well as johnny-jump-ups, all so fresh
And sassy-like!—and groun'-squir'ls,—yes, and "We."
As sayin' is,—“We, Us and Company!”

Put in old Nature's sermons,—them's the best,—
And 'casion'ly hang up a hornets' nest
'At boys 'at's run away from school can git
At handy-like—and let 'em tackle it!
Let us be wrought on, of a truth, to feel
Our proneness fer to hurt more than we heal.
In ministratin' to our vain delights—
Fergittin' even insec's has their rights!

No "Ladies' Amaranth," ner "Treasury" book—
Ner "Night Thoughts," nuther—ner no "Lally Rook"!
We want some poetry 'at's to Our taste,
Made out o' truck 'at's jes' a-goin' to waste
'Cause smart folks thinks it's altogether too
Outrageous common—cept fer me and you!—
Which goes to argy, all sich poetry
Is 'bliged to rest its hopes on You and Me.

Riley possessed an unusual amount of love and affection for the medical profession, and this is attested by his life-long friendship for several well-known Indiana physicians, and his frequent kindly reference to doctors in his poems. His presentation of "Doc Sifers" at that memorable banquet of the Indiana State Medical Association was a treat that long will be remembered in the history of Indiana medicine. His appreciation and respect for the medical man is well illustrated in the verses of "Doc Sifers" in which he says:

But, gittin' back to *docterin'*—all the sick and in distress,
And old and pore, and weak and small, and lone and motherless,—
I jes tell *you* I 'preciate the man 'at's got the love
To "go ye forth and minister!" as Scriptur' tells us of.

"When *he* come -- knife-and-saw" — Phin say, "I
 knowed, ef I'd the spunk,
 'At Doc 'ud fix me up *some* way, ef nothin' but my
trunk
 Wuz left, he'd fasten *casters* in, and have me, spick-
 and-span,
 A-skootin' round the streets ag'in as spry as any
 man!"

Doc sees a patient's *got* to quit—he'll ease him down
 serene
 As dozin' off to sleep, and yit not dope him with
 mor-*phen*.—
 He won't tell *what*—jes 'lows 'at he has "airn't the
 right to sing
 'O grave, where is thy vitory! O death where is
 thy sting!"

He's jes a *child*, 's what Sifers is! And-sir, I'd
 ruther see
 That happy, childish face o' his, puore simplicity,
 Than any shape er style er plan o' mortals otherwise—
 With perfect faith in God and man a-shinin' in his
 eyes.

Riley contributed many verses in honor of his
 doctor friends, and a notable poem was that
 entitled "Why Not Idealize the Doctor Some?"
 written as a memorium upon the death of Dr.
 William B. Fletcher of Indianapolis.

Riley's death has brought messages of con-
 dolence and tributes to his memory from all
 over the world. Men of national fame, includ-
 ing the President and Vice-President of the
 United States, have added their sympathy and
 feelings of loss in telegrams to relatives, thus
 showing that Riley was more than a Hoosier—
 that he belonged to the nation. That he was a
 lovable man as well as a genius, and that he
 tried to see only the sunshine in life, is attested
 by all who knew him intimately. His cheerful
 optimism is reflected in his verse.

"Fer the world is full of roses,
 And the roses full of dew,
 And the dew is full of heavenly love
 That drips fer me and you."

In appreciation of Riley, Wilbur D. Nesbit
 has written a poem that voices the sentiment of
 the American people, the last two verses of
 which are as follows:

Deep-shrined within the homefolks' heart
 Is held his simple, humble art
 Which glorified the everyday
 And gave us joy along the way
 To free our souls of scars and stings—
 This man who sang of common things.

The golden song of heaven is
 A poem built of souls like his
 Whose gentle songs were fashioned of
 God's light, and laughter, life and love.
 Where is he gone? The lengthening miles
 Have lured him to the afterwhiles.

EDITORIAL NOTES

DEAR DOCTOR:

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We want THE JOURNAL to serve YOU.

DR. A. G. KREIDLER, formerly editor of the
Cincinnati Medical News, and now on the edi-
 torial staff of the *Lancet-Clinic*, writes us a per-
 sonal letter in which he says: "Let me add my
 compliments to those of others. You are issu-
 ing a 'corking' good journal." In view of the
 fact that this compliment comes from an editor
 known to be rather critical, it is duly appre-
 ciated.

DR. GEORGE F. KEIPER, of LaFayette, the
 President of the Indiana State Medical Asso-
 ciation, has been honored by being elected
 Fourth Vice President of the American Med-
 ical Association, his election to this office having
 occurred at the Detroit Session. The Indiana
 medical profession is proud in being repre-
 sented among the officers of the National Asso-
 ciation and Dr. Keiper is well deserving the
 honor.

THE new edition of the American Medical
 Directory, recently from press, deserves more
 extended sale than previous editions. It is
 more accurate in the information given, and
 contains much additional data that is of interest
 and use to all those who have occasion to use a
 medical directory. It is the one and only direc-
 tory the information contained in which is as
 nearly absolutely reliable as possible to make it.
 It is published under the auspices of the Ameri-
 can Medical Association, and without intent
 to profit.

THE next session of the Indiana State Med-
 ical Association will be held in Fort Wayne on
 Wednesday, Thursday and Friday, September
 27, 28 and 29, 1916. The afternoon and even-
 ing of Wednesday, the first day of the session,
 will be devoted to meetings of the Council,
 House of Delegates, and the smoker tendered
 by the local profession of Fort Wayne. The
 real scientific work does not begin until Thurs-
 day morning. The members of the Association
 are reminded that they should remember the
 dates.

THE antivaccinationists, the antivivisectionists, the Christian Scientists, and all other opponents of medical progress, should bring the German government to task for the official statement just issued in which the information is given that "the military measures of the central powers, in consequence of vaccination, have never been disturbed by epidemics." Compare this record with the record of any previous war, and in doing so take into consideration the fact that no war in history has ever been equal to the present war in point of numbers engaged and severity of service.

This is the season when the vacationist contracts typhoid fever, and it is not a bad policy for physicians to issue some warning concerning the folly of drinking water and eating food in localities where the possibility of contamination is very great. The summer hotel, boarding house or camp that is fly-infested and gets its drinking water supply from a locality that is close to cess-pools and therefore apt to be infected, is a splendid place to acquire typhoid fever. On the other hand, the summer vacationist, be he ever so careful about his selection of healthful and sanitary vacation places, may contract typhoid fever in a manner that is not explained easily. To be on the safe side one should take the typhoid vaccination which has proven so highly efficacious in preventing typhoid and possesses so little potential harm.

ILLINOIS has the record of permitting within its boundaries the largest number of "diploma mills" which provide easy methods of evading education requirements of the practice laws. We might add that Indiana has a few so-called "colleges" or "schools" professing to turn out in a few brief weeks or months, by correspondence course or otherwise, specialists in some branch related to medicine. The courses offered for the degree of "Dr." are so inadequate as to be ridiculous, and it is regretted that what legal barriers we have for preventing the foisting of these illy prepared and illy trained doctors upon the public are not enforced.

DR. JOSEPH RILUS EASTMAN, who is on his way to Austria with six surgeons and six nurses to take charge of a hospital of five-hundred or more beds, is having interesting as well as dangerous experiences before reaching his destination, as his letter published in this number of *THE JOURNAL* will indicate. However, though Dr. Eastman is making many sacrifices and taking no little risk, he will have fine opportunities for a class of surgical work that would never reach its highest stage of develop-

ment except at the time of such a great war as exists at the present time. We hope that Dr. Eastman will be a regular contributor to *THE JOURNAL* while he is engaged in war service.

THE American Medical Association is responsible for many activities directly beneficial to the public. For instance, there is the *Press Bulletin* which has been sent out to newspapers and periodicals all over the country. Then there is the "Speakers' Bureau" which has made an effort to supply speakers for local public health meetings. But the most marked development has been in the number and variety of pamphlets on different subjects printed and distributed to the public. These represent a grand total of 1,188,500. Of this number, 281,000 pamphlets entitled "Save the Babies," and 750,000 pamphlets entitled "Minimum Health Requirements for Rural Schools," have been issued.

THE steady growth of the idea of working units in medical practice is noted in the establishment of clinics and the organization of groups of practitioners at various points over the country. This drift is without doubt the result of an insistent demand on the part of the public and recognized by the profession that some scheme of cooperation is essential in this stage of medical progress, to the efficient dispensing of medical knowledge to the needs of the sick. The scheme is so eminently sane in purpose and is based on such sound economic principles, that unless wilfully abused is bound to succeed. It must always be remembered, however, that the physician is a professional man, and not in the ordinary sense engaged in a business enterprise. His inspirations are drawn from a study of the sciences and not from stock quotations. The very highest intellectual idealism must dominate these groups if they become in fact what they profess to be in form—institutions for the dispensation of the best products of medical thought. It will take the very strongest kind of effort to prevent these groups from becoming merely commercial enterprises. The men who compose them alone have the power to prevent this. Let them judge of the success of their organizations not alone by the ledger balances at the end of the year, but by a study of case records whereby it is revealed how much improvement over old methods has occurred. This group idea has a distinctly useful future, and should be encouraged, always, however, with the limitations noted above. It is a practical application of the laws of efficiency which the complexities of modern intellectual and social progress demand.

THE Advisory Committee of Civilian Physicians and Surgeons on Medical-Preparedness have presented a statement to President Wilson in which it is advocated that a committee of physicians in each state in the Union be appointed, they to represent an organization that will be in a position to make a comprehensive survey of the medical resources of the country, and to make a complete invoice of such resources available in peace and in emergency of war. The committee from Indiana is composed as follows:

Joseph R. Eastman, Indianapolis, Chairman
Edwin Walker, Evansville.

Miles F. Porter, Fort Wayne.

S. M. Rice, Terre Haute.

S. A. Clark, South Bend.

Chas. E. Barnett, Fort Wayne.

George F. Keiper, LaFayette.

Charles N. Combs, Terre Haute.

the latter two representing the Indiana State Medical Association.

President Wilson has advised Dr. William J. Mayo, chairman of the general committee, that he has accepted the very generous and patriotic offer and will await the maturing of a general plan of operation before taking further action.

If any doctor has failed to procure a copy of "Useful Drugs," published by the Council on Pharmacy and Chemistry of the American Medical Association, he should do so at once. The book is intended to eliminate the use of the multitude of inert substances which still have a place in pharmacopeias. Aside from this, it offers much information concerning the clinical action of drugs, and in this way many therapeutic points are definitely decided. In the report of the Board of Trustees of the American Medical Association, attention is called to the failure of so many of the medical men to support the work of the Council on Pharmacy and Chemistry, and concerning the matter the Trustees offer the following:

There is much evidence that the individual members of the profession are prescribing and using the very substances which as a combined body they condemn, and many of the journals which they support advertise and recommend these substances. There are many reasons for this, and none of them creditable. The first is the financial power of the interests of the manufacturers, and its influence on medical journals. The second is due to a credulous order of mind not capable of distinguishing evidence from mere statement, and rendering its possessor an easy victim to the lures of the promoter. The third is indolence, which finds it easier in treating patients to follow advice given in advertisements of proprietary

drugs than to undertake the arduous task of ascertaining the condition of the patient and to base thereon a sound, scientific, therapeutic treatment. No great progress can be made until the medical profession awakes to the fact that the remedy against fraudulent proprietary medicines lies in its own hands—until the profession resolves to believe rather the evidence which is presented by the scientific investigation of the substances than the biased, statements of the agents, whether presented by word of mouth or by advertisements.

AN EPOCH-MAKING SESSION.—The Detroit session promises to be the most epoch-making of any since 1901 for two reasons: First, and more important, was the creation of the office of Chairman of the House of Delegates. This will relieve the President of the Association of the task of presiding over the House of Delegates. The president is usually elected on account of his scientific attainments, and not because of his ability to preside over a deliberative body. This new order of things will be a great relief to the President, and will give him time to attend to and participate in the functions which naturally appeal to the presiding officer of a great scientific body such as the Scientific Assembly has become. On the other hand, the House of Delegates will be presided over by a man selected because of his knowledge of the activities of the Association, of the procedure of the House of Delegates, and on account of his ability as a presiding officer. The House selected as its first Chairman Dr. Hubert Work of Pueblo, who for many years was a member of the House and who is thoroughly conversant with its procedures. The second epoch-making change is that which provides that the opening meeting of the Scientific Assembly—the General Meeting—shall be held on Tuesday evening, the scientific sections to convene on Wednesday morning instead of on Tuesday afternoon as heretofore. The main object of this change is to give the House of Delegates two days for its deliberations before the opening of the Scientific Assembly. It is unnecessary to dilate on the importance of this change so far as the House of Delegates is concerned; many men have hesitated to serve as members of the House because that work has prevented them from attending the sections. Under the new order of things the great probability is that the House of Delegates will complete its work on Tuesday, except for the election of officers, and business incidental to its closing meeting. The change will also be of decided advantage to the Scientific Assembly. Heretofore the Scientific Assembly commenced Tuesday morning, the first half day being taken

up with the opening general meeting. Hereafter the opening exercises will take place on Tuesday evening, and the scientific sections will begin their programs on Wednesday, continuing through Thursday and Friday, meeting both morning and afternoon.—*Jour. A. M. A.*, June 24, 1916.

THE August number of *The Modern Hospital*, St. Louis and Chicago, is devoted to a symposium on welfare work among the industrial corporations of the country. There are editorials by those competent to write on this important subject, a great number of papers written by welfare directors in some of the most important industrial corporations, and an immense amount of statistics and figures and facts showing the huge volume of work that the corporations are doing to protect their employees against sickness, accidents, and discontent. The journal contains many illustrations of first aid stations, emergency hospitals, and welfare departments of industrial plants, and many facts that should be of great help to those interested. Among the topics discussed are those of first aid, industrial nursing, lunches and diets for industrial employees, safety devices in factories, and athletic and social clubs for employees. The editors frankly state that they have been unable to obtain figures as to cost of welfare work in the industries, but a number of writers attempt to make deductions and draw conclusions from their experiences of the past few years.

The Modern Hospital divides welfare work into three phases:

1. To make employees healthy, comfortable, and happy, in order that they may achieve the highest efficiency in their work.
2. To help employees prepare for the day when they are prevented from being bread winners, so that dependents on them may be provided for in case of sickness or disability.
3. To provide entertainment, recreation, and interesting groupings, in order that the employees of the corporation may have mutual interests which will enhance their loyalty and team-work.

Some able writers have discussed the various features of welfare work for the different branches of industry, as, for instance, Dr. Thomas Darlington, former health commissioner of New York and medical director of the American Iron and Steel Institute, discusses the present scope of welfare work in the iron and steel industries. Dr. Samuel Lambert writes on provision for medical care under

health insurance, and Dr. S. S. Goldwater, formerly health commissioner of New York, has an editorial on the conservation of health of industrial workers. Welfare work in the public utility corporations is discussed by Mr. H. H. Vreeland, general manager of the Interborough Rapid Transit Company, New York. Mr. James Prentiss Duncan discusses welfare work in the telephone and telegraph corporations. Mr. H. G. Kobick, manager of the employment department of the Commonwealth Edison Company, discusses welfare work in the electric lighting corporations. Mr. S. F. Moore discusses welfare work among the gas corporations. There are stories of welfare work in such department stores as Wanamaker, Macy's, Marshall Field, and similar great concerns. Mr. G. A. Ranney, secretary, discusses welfare work of the International Harvester Company. Mrs. Anne Kendrick Walker discusses welfare work among the clothing and suit manufacturers. A representative of Armour & Co. writes on the subject of welfare work in Packingtown, Chicago. Besides many more of these special papers, there is an epitome of welfare work in hundreds of the corporations of the country.

Perhaps the best feature of the industrial number of *The Modern Hospital* is the attempt on the part of the editors to weed out those features of industrial welfare that they believe undesirable and to emphasize those that seem to best meet the present needs of the American public.

DEATHS

WILLIS S. BRYANT, M.D., Dale, died July 6, aged 67 years.

H. V. BROWN, M.D., Portland, died July 29, aged 73 years.

JOHN B. PETERS, M.D., died July 2 at his home in Macy, aged 69 years.

REUBEN MARSHALL, M.D., Cowan, died July 10 from heart trouble, aged 76 years.

SAMUEL J. SNODGRASS, M.D., Burket, died July 1, at Mercy Hospital, Denver, Colo.

CHARLES T. RANIER, M.D., retired, died at his home in Decatur June 29, aged 74 years.

ELMER M. DRULEY, M.D., retired, died July 18 at his home in Centerville, aged 53 years.

OLIVER McLAHLAN, M.D., aged 61, died July 18 at his home in Oolitic after a long illness.

JESSE HENRY DEER, M.D., Zionsville, died August 2 at Indianapolis, where he had been taken for treatment.

CHARLES W. OVERPECK, M.D., aged 37 years, shot and killed himself July 11 at his home at Rockville. He graduated from the Indiana Medical College in 1904, and was a member of the Indiana State Medical Association.

DANIEL YINGLING, M.D., aged 76 years died July 17 at his home in Huntington, from heart trouble. Dr. Yingling was born in Carroll County, Maryland, in 1839, and graduated from the Eclectic College of Medicine at Cincinnati in 1865.

HERMAN GRIEBEL, M.D., formerly assistant to Dr. M. I. Rosenthal, Fort Wayne, died July 27 in his room at Hotel Lorraine, Indianapolis. He had been in poor health for some time and had temporarily given up his practice, doing outdoor work, in the hope of regaining health. He was 31 years of age.

EDWARD N. FLYNN, M.D., Jeffersonville, died July 9, aged 49 years. Dr. Flynn was born in New Bedford, Mass., in 1867, moving to Jeffersonville at the age of two years. He was a graduate of the Louisville Medical College, practiced his entire time at Jeffersonville, and served four years as mayor of that city. He was a member of the Indiana State Medical Association.

RICHARD W. SIPE, M.D., of Orange, died June 30 following an illness of three months from Bright's disease. Dr. Sipe was born in Jefferson County April 8, 1840, moved to Orange in 1864, graduated from Indiana Medical College in 1875, and practiced medicine his entire time at Orange. He was a member of the Indiana State Medical Association.

GEORGE S. CRAWFORD, M.D., died July 23 at his home at Milford, aged 64 years. Dr. Crawford was born in Lawrenceburg in 1852, graduated from Moores Hill College and from the Indiana Medical College, and began the practice of medicine at Milford, where he practiced continuously until his death. He was a member of the Decatur County Medical Society and the Indiana State Medical Association.

CHARLES W. SHILL, M.D., LaFayette, died July 8, following a second stroke of paralysis. Dr. Shill was born in Shelby County, Ohio, in 1851, graduated from Louisville Medical College in 1876, and began the practice of medicine at Battle Ground, Indiana. In 1880 he located at LaFayette where he continued to reside until his death.

FREDERICK R. CHARLTON, M.D., Indianapolis died July 29 at the Methodist Hospital, Indianapolis, following an abdominal operation; aged 43 years. Dr. Charlton was born in North Vernon, received his early education at Plainfield, attended Hanover College, and graduated from the Indiana Medical College in 1894. He served as interne at the City Hospital for one year, after which he took some extra work at the medical school of the University of Pennsylvania, returning to Indianapolis to begin his practice. At the time of his death he held the chair of Clinical Professor of Genito-Urinary Surgery in the Indiana University School of Medicine, was a member of the Indiana State Medical Association, American Medical Association, and Fellow of American College of Surgeons.

EDWARD FRANCIS HODGES, M.D., Indianapolis, Ind., died of cardiac asthma July 11, at his summer home Glimmerstone, Cavendish, Vt.

Dr. Hodges was born in Boston, Mass., Aug. 1, 1851. His boyhood home was at Lincoln and his early associations were near Concord where he knew the Emersons, Alcotts, Frenches and others who made this New England town famous.

As a small boy he attended the celebrated school at St. Hyacinthe, near Montreal, where he acquired fluency in French. Returning from St. Hyacinthe he attended the Boston Latin School and in the fall of 1863 entered Phillips Exeter Academy graduating in 1867. The following fall at the age of 16 he entered Harvard. During his college course he studied under Asa Gray, Louis Agassiz, Oliver Wendell Holmes and others of the group which brought Boston to the front as the center of American culture.

Dr. Hodges received the degree of A.B. in 1871. The next year he went to Washington, D. C., and became an examiner in the Patent Office, at the same time attending lectures at the Medical School of Georgetown University, where in 1874 he won his first M.D. In 1875 he returned to Boston and entered the Harvard Medical School, where by rigid application he won his second M.D. in 1877.

Dr. Hodges came to Indianapolis in 1880, where for thirty years he engaged in the general practice of medicine. He served as a member of the faculty of the Indiana Dental College, lecturer to the City Hospital Training School for Nurses, Pathologist for the Central Hospital for the Insane, Obstetrical Surgeon for the Indianapolis City Hospital, Contract Surgeon at the Arsenal, and for over twenty-five years Professor of Obstetrics of the Indiana University School of Medicine. For his students he prepared an Obstetrical Chart which proved of great value to them and to the profession.

Dr. Hodges was a member of the Board of Trade, a thirty-second degree Mason, appointed by the Indianapolis School Board as Trustee of the Gregg Fund, Vestryman of Christ Church, a member of the Pi Eta Society at Harvard, a Founder and first President of the Harvard Club of Indiana, first Governor of the Society of Mayflower, a member of the Marion County (Ind.) Medical Society, Fellow of the American Medical Association, Fellow of the Mass. Medical Society, Fellow of the Royal Microscopical Society London, Professor Emeritus of the Indiana School of Medicine as well as a member of various clubs.

Dr. Hodges found time while attending to a busy practice to carry on his studies in botany and bacteriology, to win honors as a marksman, to become a gem expert, a judge of letters, an authority on Indian lore, a sailor, a linguist and a traveler.

Dr. Hodges is survived by his widow, Laura, daughter of Stoughton A. Fletcher, Jr., and one son, Dr. Fletcher Hodges, of Indianapolis.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better *Journal* for you.

INDIANAPOLIS

Dr. J. D. MOSCHELLE spent part of July at the Mayo Clinic, Rochester.

Dr. and Mrs. EDGAR F. KISER have been taking an extended trip through the Northwest.

Dr. and Mrs. C. M. EISENBEISS have returned from an extensive motor trip through northern Michigan.

Dr. ALFRED HENRY, formerly located at 416 Board of Trade Building, is now located at 720 Hume-Mansur Building.

Dr. and Mrs. JOHN N. HURTY are spending the summer at their cottage in Michigan.

Dr. and Mrs. CHAS. F. NEU have returned home from an extended trip through the West.

Dr. WILLIAM F. CLEVINGER announces the removal of his offices from Newton Claypool Building to 403-404 Hume-Mansur Building.

Dr. R. O. McALEXANDER has removed his office to 740 Newton Claypool Building. Practice limited to surgery and diseases of women.

MAJ. LARUE D. CARTER, of the Field Hospital Company was married July 9 to Miss Anna May Gant, supervisor of nurses at the City Hospital. The wedding took place just before Major Carter left for the border.

Dr. ALFRED HENRY, James K. Lilly, Mrs. Jacques Holliday, and Dr. John A. MacDonald have been named by the county commissioners as Board of Managers for the new county tuberculosis hospital. They will serve 4, 3, 2 and 1 years, respectively.

THE cornerstone for the new Marion County Tuberculosis Hospital, which has been christened "Sunnyside," was laid July 22. A representative number of prominent physicians, state health authorities and workers were present. Dr. Alfred Henry presided as master of ceremonies, and Dr. J. N. Hurty made the principal address. The Newsboys' band furnished music.

DOCTORS and nurses connected with the pure milk station committee of the Children's Aid Association have completed arrangements for carrying on work of prenatal nursing. The plan includes a follow-up system whereby the lives of the children coming under the direction of this committee will be watched after they enter school to determine what advantages they have over children who do not receive prenatal care.

A CARD dated July 8, from Dr. and Mrs. J. P. Simonds, reads as follows: "We arrived safely Monday night. Delightful voyage. Dr. Simonds is transferred to La parme, Belgium, with Dr. DuPage at Queens Hospital. We are very grateful for the kind remembrances and for all the letters from Indiana friends. At present we are living at the Regina Hotel. Our window opens upon Jardin des Tuileries." Dr. Simond's present address is The Equitable Trust Company of New York, 23 Rue de la Paix, Paris, France.

GENERAL

DR. G. W. H. KEMPER, Muncie, spent most of the month of July at Winona.

DR. J. P. WORRELL, of Terre Haute, has been taking an extended eastern trip.

DR. H. L. BUCKLES, Hartford City, and Miss Nina Ludy of Millgrove, were married July 20.

DR. C. R. WRIGHT, of Frankton was married on July 19 to Miss Lizzie Lacy of Perrysville.

INDIANA HARBOR is to have a new hospital to be known as the Harbor General Hospital.

DR. and MRS. J. C. SEXTON, of Rushville, spent their vacation motoring through the East.

A LEGACY of \$1,000 has been left to the Elkhart General Hospital by the late Cyrus D. Roys.

PHYSICIANS of Columbus, Ind., have no office hours after 6 p. m. during July and August.

DR. and MRS. A. E. FAUVE, Fort Wayne, are spending some time at their summer home at Bass Lake.

DR. P. B. LITTLE, of Whitestown, was married on June 29 to Miss Dora Schooler, also of Whitestown.

DR. J. P. HETHERINGTON, of Logansport, will have associated with him in his practice Dr. J. H. Hare, from Indianapolis.

WORK on the new Bartholomew County Hospital is progressing rapidly, and will be completed by the first of the year.

DR. H. L. BERNHEIMER, Terre Haute, has received word of the death of his father which occurred May 15 in Stuttgart, Germany.

DR. and MRS. C. H. EDWARDS, of Terre Haute, spent the latter part of July and first two weeks of August at Bay View, Mich.

DR. E. E. SCHRIEFFER, Ferdinand, was married recently to Miss Ella Beckman of the same town. The wedding took place at Tell City.

DR. N. E. JOBES, Indianapolis, has been appointed medical examiner for those who apply for enlistment in the Indiana National Guard.

DR. SAMUEL R. CUNNINGHAM, of Oklahoma, Okla., announces the new location of his office at 509-513 American National Bank Building.

DR. G. B. STEMEN, Fort Wayne, has been appointed a member of the board of examining surgeons for pension to succeed Dr. B. Blosser.

DR. A. G. BARRETT and family of Danville have been taking an extended motor trip through southern Indiana, Kentucky and Illinois.

DR. L. F. SCHMAUSS, of Monticello, suffered a broken wrist, fractured rib, and other injuries when he fell from the top of a sixteen-foot ladder.

DR. and MRS. W. O. MCBRIDE, Fort Wayne, left July 21 for a motor trip through the East. They will spend some time in the Berkshire Hills.

DR. THOMAS M. JONES and family of Anderson have been touring through Virginia, New York, and the New England States up into Maine.

DR. CLAIRE TAYLOR, Peru, has made a gift of \$1,200 to the Miami County Hospital to be used in the purchase of some real estate adjoining the hospital.

DR. and MRS. K. K. WHEELOCK, Fort Wayne, are making an extended trip through the West, including Banf, Lake Louise, Portland, etc. They will be gone until September 1.

DR. E. O. DANIEL, Marion, has returned from Baltimore where he has been doing post-graduate work at the Johns Hopkins Hospital in internal medicine and dermatology.

DRS. J. P. SPOONER and O. R. Lynch of Peru left July 26 to attend the National Military Training Camp for Physicians, at Plattsburg, N. Y. They spent two weeks at the Camp.

DR. H. W. HAYS, Albion, was honored by the Baltimore & Ohio Railway Surgeons Association at their recent meeting at Philadelphia by being elected president of the Association.

DR. L. A. SPAULDING, of Bluffton, has returned from a six weeks' trip through the West, including Denver, Salt Lake City, Yellowstone Park, and different points in Kansas. He is much improved in health.

ACCORDING to the ruling of the State Board of Health made on July 7, the public drinking cup is positively abolished after August 1. Special instructions have been sent to health authorities and officials all over the state.

DR. A. O. BIGHAM of St. Anthony was absent from the July meeting of the Dubois County Medical Society. This is the first meeting Dr. Bigham has missed in nearly three years.

DR. GEORGE F. KEIPER, LaFayette, President of the Indiana State Medical Association, was elected Fourth Vice President of the American Medical Association at the recent Detroit session.

ORGANIZATION of an Indiana society for the study of mental hygiene is pending. Dr. S. E. Smith, superintendent of the Indiana Hospital for the Insane at Richmond is heading the movement.

DRS. W. G. CRAWFORD, J. Rudolph Yung, and Chas. N. Combs, of Terre Haute, returned home August 1 from Boston, where they attended Harvard Post-Graduate School of Medicine.

DR. B. F. PENCE, 1916 graduate of Indiana University School of Medicine, has established an office at Churubusco and begun practice of medicine at that place August 15. Prior to beginning his work at Churubusco he has been assisting Dr. G. W. McCaskey of Fort Wayne.

DR. WILLIAM D. SCHWARTZ, Portland, is to have associated with him in his practice Dr. Edgar Hiatt, 1916 graduate from Indiana University School of Medicine. Dr. Schwartz will spend the greater part of the summer with his family at the lake.

THE Louisville Neuropathic Sanatorium, Louisville, Ky., has purchased Dr. Board's Sanatorium, also of Louisville, and will move into that property September 1. The name "Louisville Neuropathic Sanatorium" will be continued.

DR. BERNARD RAVDIN, son of Dr. Marcus Ravdin, Evansville, was married on July 18 to Miss Henrietta Meyer of Columbia City. Dr. Ravdin graduated this spring from Indiana University School of Medicine, and will be associated in the practice of medicine with his father at Evansville.

DR. H. N. OLIPHANT, of Frankfort, has disposed of his practice to Dr. A. Hamilton, formerly of Michigantown, Ind., and on July 25 assumed duties as assistant surgeon at the Marion Branch, Military Home, Indiana, by appointment.

DR. B. W. EGAN has returned from a year's work in New York, Philadelphia and Baltimore, and opened an office at Logansport for the treatment of diseases of the eye, ear, nose and throat.

DR. T. C. KENNEDY of Indianapolis delivered a lecture on Radium before the Tabernacle Church Society of Men at Columbus on June 12, quite a number of the physicians of the county attending.

ANY of our readers who are interested in hay fever vaccines may secure some interesting brochures from the H. K. Mulford Company who are putting out some vaccines made from the pollens of ragweed only.

EPWORTH HOSPITAL, South Bend, is to be benefitted by a gift of \$20,000 if the people of South Bend will raise an equal amount. The gift comes from the members of the family of the late Mrs. Clem Studebaker.

THE LAKESIDE HOSPITAL, Kendallville, established by the Kendallville Medical profession, has been turned over to the people of Kendallville as a public institution. The property includes hospital building, maternity building, and three acres of land.

EDWARD E. ANSTEAD gave \$12,000 for the new Fayette County Hospital on the condition that the citizens would raise \$36,000. After the laying of the corner stone, Mr. Anstead notified the committee that he would give an additional \$25,000.

DR. E. RAY ROYER, formerly of North Salem, has returned from New York, where he has spent two months in post-graduate work, and has located at 902 Hume-Mansur Building, Indianapolis. Dr. A. E. Mzingo has taken over Dr. Royer's practice at North Salem.

DR. ARCHIE SCHULTZ, 1916 graduate from Indiana University School of Medicine, has been appointed intern at St. Elizabeth Hospital, LaFayette. Dr. Hunter, whose place he fills, has taken charge of the practice of Dr. A. C. Arnett who has gone to the border in military service.

A GIFT of \$95,000 has recently been made to the Johns Hopkins University, Baltimore, to be used for the investigation of tuberculosis and the better teaching of physicians and medical students in the recognition and management of the disease and the care of patients. Dr. Kenneth Dows of New York is the giver.

THE seventh annual session of the American Association for the Study and Prevention of Infant Mortality will be held at the Hotel Wisconsin, Milwaukee, Oct. 19 to 21, 1916. A very full and complete program has been issued and the same may be obtained by addressing the Secretary, Dr. Philip Vaningen, 125 East 71st Street, New York City.

DR. ELIZABETH WILEY CORBETT, sometimes called the "foster mother of the pure food law," because she brought up her brother, Dr. Harvey W. Wiley, died recently at Washington, D. C., aged 82 years. Dr. Corbett was born at Kent, Ind. She was an honorary life member of the American Medical Association.

MERCURIALIZED serum represents an important advance in the administration of mercury for the treatment of cerebral and systemic syphilis. To supply the demand for mercurialized serum the H. K. Mulford Company is furnishing mercurialized serum in sealed ampoules which may be obtained in varying doses to be used for either the intraspinal or intravenous treatment.

THE physicians of Hancock County have adopted a fee bill and are establishing a list of persons deemed to be unworthy of credit as a result of failure to pay for medical or surgical attention when able to do so. Those signing the bill agree to enter into no contract of any kind whatsoever to do lodge or other corporation practice except at the minimum fees in the fee bill as adopted.

THE fourth annual convention of the Cremation Association of America will be held in the auditorium of the Hotel Gibson, Cincinnati, Thursday and Friday, August 24 and 25. All those who believe in or are interested in cremation are cordially invited to attend. They are also eligible to associate membership upon payment of one dollar to the treasurer, Mr. E. P. Samson, 433 Sixth Avenue, Pittsburgh, Pa., a formal application not being required. Money thus obtained is used for purposes of propaganda.

THE report of the Indiana State Board of Health for June shows that the northern sanitary section, which includes the counties in the northern part of the state, has the highest death rate of the state, being 11 to each 1,000 inhabitants. The rate of the central sanitary section was 10.7 and the southern, 9.9. There were 903 deaths in the northern section; 1,034 in the central, and 557 in the southern.

THE Whitley County Medical Society held a very profitable meeting at South Whitley on August 8, with the following program of scientific papers: "Infantile Paralysis," Dr. L. Park Drayer, Fort Wayne; "The Expert Witness," Hon. D. V. Whiteleather, Columbia City; "Sluder's Tonsillectomy," Dr. Fred Eberhard, South Whitley; "What We Learned at the A. M. A. Meeting," Drs. O. V. Schuman and O. W. Grisier, Columbia City.

INDIANA doctors will be interested in knowing that the 42d annual session of the Mississippi Valley Medical Association will be held at the Claypool Hotel, Indianapolis, on Oct. 10, 11 and 12, 1916. Dr. Albert E. Sterne of Indianapolis is Chairman of the Committee on Arrangements. All Indiana physicians are invited to attend the various meetings of the Association. A very interesting program has been prepared, and the sessions should be successful, both scientifically and socially.

DR. JOHN B. MURPHY, of Chicago, died very suddenly on August 11 at his summer home at Mackinac Island. Death was due to heart trouble, although he had been in ill health for several months. He was 58 years of age. Dr. Murphy reached prominence in practically every branch of surgery, but his work in intestinal surgery and bone and joint surgery stand foremost. He had received the most distinguished honors that could be accorded a surgeon in this country, including presidency of the American Medical Association (1913), and that of the Clinical Congress of Surgeons. He also held the chairs of Professor of Principles and Practice of Surgery, and Clinical Surgery in the University of Illinois.

THE August issue of the *Archives of Pediatrics* is a special one devoted to a full report of the meeting called by the New York Academy of Medicine on July 13 to discuss the subject of Poliomyelitis (infantile paralysis). Among the papers included in this symposium

are: "The Nature, Manner of Conveyance and Means of Prevention of Infantile Paralysis," Simon Flexner, M.D.; "The Clinical Types of the Disease," Henry Koplik, M.D.; "Abortive and Non-Paralytic Cases, their Importance and their Recognition," George Draper, M.D.; "The Present Epidemic—the Types Which it Presents," Louis C. Ager, M.D.; "Laboratory Aids in the Diagnosis," Josephine B. Neal, M.D.; "The Importance of the Present Epidemic," Haven Emerson, M.D.

PARKE, DAVIS & COMPANY recently have furnished us with a curiosity in the shape of a brochure printed by a mission press in Shanghai to advertise a number of the Parke, Davis & Company specialties, and intended for circulation among Chinese practitioners. The text was prepared in the United States, sent to China where it was translated into Chinese, and then retranslated into English by a different group of linguists, as a species of control. The second English version was finally approved in the United States, and the first manuscript sent again to China for printing. A deer's-head trademark was adopted in order to protect the Chinese patrons from imitations. Inasmuch as the Editor of THE JOURNAL does not possess the accomplishment of being able to read Chinese printing he is unable to pass any comment upon the value of the work, though he presumes that it is all a good Chinaman could ask for from a well-known and progressive firm.

NAMES sometimes designate without adequately describing. Such is the case with the Battle Creek Sanitarium which will celebrate the fiftieth anniversary of its founding on October 3, 4 and 5. This institution is a sanitarium, with all the most modern and scientific equipment for diagnosing and curing disease. But it is much more. From its inception, it has been in the forefront of the movement for natural, rational and physiologic methods in the treatment of the sick. Primarily, indeed, its function has been education—the teaching of right principles of living as not only aiding in curing sickness but preventing its return as well. The Sanitarium therefore has taken an active and a leading part in movements for public sanitation, for diet reform, to curb the liquor evil, to check tuberculosis, to abolish child labor and more especially to study tendencies toward race degeneracy and to point out eugenic and other remedies for them.

Being purely a charity, and having no dividends to pay to stockholders, it has been able in the half century of its existence to spend over \$1,400,000 for the care of the indigent sick.

The program for the celebration includes a huge banquet, receptions, a big outdoor spectacle, a street pageant, with historical and allegorical floats, a race betterment exhibit, conferences on child labor, eugenics, tuberculosis and other sociological and medical problems of the day, with numerous speakers of prominence, and a Health Chautauqua.

All physicians are invited to come.

SOCIETY PROCEEDINGS

THE MUNCIE ACADEMY OF MEDICINE

Meetings of June 23 and 30 were devoted to reports of Detroit meeting of American Medical Association by members who were present.

Dr. Molloy gave an interesting account of the graphic portrayal of surgical operations performed by Dr. Wyeth, reproduced by the kinetograph.

Dr. L. L. Ball considered strides taken in field of preventive medicine as having particular interest and significance.

Dr. Kirklin devoted most of his time to the scientific exhibits; and told of an interesting visit to the Ford Motor Company's plant.

Dr. Wadsworth gave a splendid talk on the ultimate results that would naturally follow such meetings of representative men doing such earnest and conscientious work, and the credit that should accrue to the self-sacrificing surgeon and physician who devotes his life to the welfare of his community and fellow men.

Dr. Dunn demonstrated that learned dissertations and scientific exhibits were not the only attractive features to be found during a convention week in the city of Detroit.

Dr. Mix said he was not so much impressed by facts and statistics presented in papers and discussions as by the trend of the mind of the speakers, and the attitude of the profession toward certain innovations. Dr. Crile's anoci-association theory is gaining favorable recognition among surgeons who were somewhat hostile a few years ago. The fate of nitrous oxid as a general anesthetic rests with the young men and not with the older surgeons who are secure in a perfected technic. Much attention is now devoted to pathology involving the spleen, and its appropriate surgery. One interesting paper dealt with a pseudo appendicitis which is in reality a reflex manifestation due to gastro- or enteroptosis or both.

The "Chloroform in Labor" controversy again bobbed up and, as usual, the young men were pitted against the older obstetricians.

Adjourned.

H. D. FAIR, Secretary.

BARTHOLOMEW COUNTY

It has been the custom for the past few years for the society to hold one meeting during each year at a different place in the county. On June 13 the meeting was held at Azalia.

Meeting called to order by the president, Dr. J. I. Maris, at 10:30 a. m. Minutes of the last meeting read and approved. A communication from the Marion County Medical Society in regard to medical legislation was read and quite freely discussed. The secretary was instructed to write the legislative candidates of our county to meet with us at our September meeting.

Dr. A. P. Roope gave a talk on Gastric Ulcers which was followed by a free discussion.

The good ladies of Azalia furnished the society with an excellent dinner. On account of the threatening weather several doctors were kept away; nevertheless we had a good meeting. Including the doctors' wives there were twenty-two present.

Adjourned. JAMES W. BENHAM, Secretary.

DELAWARE COUNTY

Regular meeting of Delaware County Medical Society was held in Muncie Y. M. C. A. building, Friday evening, July 7, and was called to order at 8:15 by past president I. N. Trent.

C. M. Mix read a paper on "Extra-Uterine Pregnancy," saying:

It is now generally conceded that the ovum is impregnated soon after being extruded from the Graffian follicles of the ovary, and thus the very earliest stages of development take place during its migration from its location at the time of impregnation to the point of implantation.

Types are as follows: Primary ectopic gestation: 1. Tubo-uterine of interstitial. 2. True tubal; isthmal, ampular, infundibular. 3. Tubo-ovarian. 4. Ovarian. Secondary ectopic gestation: 1. Abdominal. 2. Intraligamentous. What may happen: The ovum in whole or in part soon grows too large for its environment and escapes from the tube in one of the four directions, in the following order of frequency. 1. Outward, by tubal abortion through the fimbriated extremity. 2. Upward, by rupture into the peritoneal cavity. 3. Downward into the folds of the broad ligament forming a pelvic hematoma, with usually the death of the fetus and absorption or abscess formation. 4. Inward, into the uterus, interstitial variety, with resulting abortion from uterus, or continuation as a normal pregnancy.

The hemorrhage that occurs in ectopic pregnancy is the controlling factor in the symptomatology, the outcome, and to a large extent forms the basis for surgical interference.

A case presenting some or all of the following symptoms may be diagnosed extra-uterine pregnancy with fair degree of accuracy. Missed menstruation; sudden onset of pain often accompanied by fainting and sometimes collapse; bloody vaginal discharge, usually with or shortly after the onset of pain; exacerbations of pain without corresponding rise in temperature, with an increase in the pelvic mass after each attack.

Nearly half of my operative cases have presented the following picture. On exposing the peritoneum the blue color of the blood free in the peritoneal

cavity showed plainly through the semi-transparent membrane. Pregnancy located in the infundibulum of the tube was either partially or wholly extruded from the end of the tube, with or without free hemorrhage.

We may say the older the pregnancy before rupture the greater the danger of a severe progressive hemorrhage. Patients found with a ruptured ectopic should be taken at once as carefully as possible to a hospital where everything can be held in readiness for operation. The watchful waiting should not be done at a distance from surgical aid. With the patient in the hospital, delay may be the proper thing.

Desperate cases should be operated under local anesthetic. Otherwise, if possible, oxygen-gas-novocain anesthesia; lastly ether.

Adjourned.

H. D. FAIR, Secretary.

THE TRUTH ABOUT MEDICINES**NEW AND NONOFFICIAL REMEDIES**

Since publication of New and Nonofficial Remedies, 1916, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

STANDARD RADIUM SOLUTION FOR DRINKING (1 MICROGRAM RA).—Each bottle (60 Cc.) contains radium chloride equivalent to 1 microgram Ra, and 1.3 mg. of barium chloride. The solution contained in one bottle is taken after each meal. The Radium Chemical Co., Pittsburgh, Pa. (*Jour. A. M. A.*, July 1, 1916, p. 35).

RADIUM BROMIDE, SCHLESINGER RADIUM CO.—It complies with the standards of N.N.R. and is sold on the basis of its radium content. Schlesinger Radium Co., Denver, Colo.

RADIUM CARBONATE, SCHLESINGER RADIUM CO.—It complies with the standards of N.N.R. and is sold on the basis of its radium content. Schlesinger Radium Co., Denver, Colo.

RADIUM CHLORIDE, SCHLESINGER RADIUM CO.—It complies with the standards of N.N.R. and is sold on the basis of its radium content. Schlesinger Radium Co., Denver, Colo.

RADIUM SULPHATE, SCHLESINGER RADIUM CO.—It complies with the standards of N.N.R. and is sold on the basis of its radium content. Schlesinger Radium Co., Denver, Colo. (*Jour. A. M. A.*, July 8, 1916, p. 121).

VITALAIT STARTER.—A culture in vials of the *Bacillus bulgaricus* and the *Streptococcus acidilactici* in symbiosis. It is intended for the home preparation of fermented milk. Sufficient to prepare from 1 to 3 quarts of fermented milk is sent on request of the physician to the patient twice a week. The Vitalait Laboratory, Inc., Newton Centre, Mass. (*Jour. A. M. A.*, July 15, 1916, p. 203).

PROPAGANDA FOR REFORM

AROMATIC SPIRITS OF AMMONIA.—This is an old fashioned complex mixture. Its reputation has little scientific basis. Its effects probably are psychic, in the main. Such effects might be expected from the irritation of the nasal mucosa by the ammonia and to the flavor and odor of the lemon, lavender and nutmeg oils. The physical effect is probably due to the alcohol though the ammonium carbonate and uncombined ammonia may have some restorative

action by the irritation of the gastric mucosa or by their neutralization of nauseating acids in the stomach. When the effects of ammonium carbonate are desired, this is better given in aqueous solution. When the effects of alcohol are desired, whisky is to be preferred (*Jour. A. M. A.*, July 1, 1916, p. 65).

THE PHARMACOPOEIA REVISION.—As usual the Pharmacopoeia about to be issued will be antiquated when it comes out. Some of the drugs in it will have become more or less obsolete, while many new ones which have proved of value will not be there. Since all the publications of the A. M. A. are issued promptly and in excellent style, and are complete, correct and up to date, it is suggested that the U. S. P. should be taken over by the A. M. A., and be henceforth published by it. It may be extreme to say that the world would be almost as happy without a Pharmacopoeia, but at least we could get along very nicely with a Pharmacopoeia about one half the size of the present one. A good deal of the matter it contains is quite superfluous and its deletion would prove distinctly advantageous to (1) the book, (2) to the medical profession, (3) to the pharmaceutical profession and (4) last but not least, to the students of medicine and pharmacy (*Critic and Guide*, July, 1916, p. 239).

WINE OF CARDUI VERDICT.—Anent the verdict in the recent "Wine of Cardui trial" awarding one cent damages to the Chattanooga Medicine Company, a medical journal offers condolences to the American Medical Association, declares that the verdict is "a very decided victory for the 'patent medicine' association," and asks "is publicity the way to accomplish the true end?" The outcome of the case was a moral victory for the Association and publicity is the only rational means of attacking the nostrum evil, whether of the "patent medicine" or of the "ethical proprietary" variety. Until the public is given definite and specific facts no great strides will be made in preventing unscrupulous cupidity from preying on the sick and suffering. The faith of the public in patent medicines of all sorts continues because no small part of the medical profession is itself still under the blight of the "patent medicine" business—albeit the preparations in question are euphemistically spoken of as "ethical proprietaries" (*Jour. A. M. A.*, July 15, 1916, p. 206).

COCAIN SUBSTITUTES.—Treasury Decision 2194 places "alpha and beta eucaine or any of their salts or any synthetic substitute for them" under the provisions of the so-called Harrison Narcotic Law. To this ruling, the Farbwerke-Hoechst Company, the manufacturers of novocain, a synthetic substitute for cocain, took exception and, by agreement, a test case was argued before the United States District Court of New York. It is reported that the court took the case from the jury and ordered a verdict for the Farbwerke-Hoechst Company on technical grounds (*Jour. A. M. A.*, July 15, 1916, p. 208).

AROMATIC SPIRITS OF AMMONIA IN SHOCK.—Horatio C. Wood, Jr., explains that any stimulating effect which may be observed after the oral administration of aromatic spirits of ammonia is due either to a psychic effect or to its local irritant action on the gastric mucosa, just as the irritation by ammonium carbonate, in the form of smelling salts, of the mucous membrane of the nose may reflexly excite the medulla (*Jour. A. M. A.*, July 15, 1916, p. 231).

PHENOL ANTIDOTES.—Various substances, fixed oils, glycerin, diluted sulphuric acid, the soluble sulphates of the alkalis and alkali earths, have been recom-

mended as antidotes or prophylactics of phenol poisoning. M. I. Wilbert discusses the value, or lack of value, of the various reagents proposed as antidotes to phenol poisoning. He points out that glycerin will not prevent the production of gangrene or the absorption of phenol. Wilbert points out that the other substances mentioned have been found inefficient as detoxicants for phenol, and in many instances distinctly harmful. He further notes that, while the value of alcohol as an antidote for phenol poisoning has been scientifically disproved, yet even as late as 1915, the fallacy that ethyl alcohol is an antidote to phenol has been embodied in state laws designed to restrict the sale of phenol. Recent investigation, carried out in the Hygienic Laboratory, shows that in the presence of water neither alcohol nor glycerin has any detoxicating effect on phenol (*Jour. A. M. A.*, July 15, 1916, p. 233).

POISONING FROM LEAD PAINTS.—The reports of the British departmental committee, appointed to investigate the dangers of the use of lead compounds in the painting of buildings, shows the principal source of poisoning to be dust, produced during the mixing of dry white lead with oil and in the dry rubbing down process. While the first danger is done away with by the use of ready mixed paints, the committee proposes drastic legislation to remedy the second evil. The committee recommends the enactment of a law prohibiting the importation, sale or use of any paint material containing more than 5 per cent. of its drug weight of soluble lead compounds (*Jour. A. M. A.*, July 15, 1916, p. 234).

POISONOUS PROPERTIES OF THE GARDEN DAFFODIL.—The bulbs of the garden daffodil (known botanically as *Narcissus pseudonarcissus*) contain an alkaloid (or alkaloids) whose physiologic action differs according to the stage of growth of the plant. The alkaloid extracted from the flowering bulb produces dryness of the mouth, checks cutaneous secretions dilates the pupil, quickens the pulse, and slows and weakens the heart contractions. The alkaloid extracted from the bulbs after flowering produces copious salivation, increases cutaneous secretion, contracts the pupil, and produces slight relaxation of the pulse, slight faintness and nausea. Such widely divergent physiologic effects indicate that there must be considerable differences in the nature of the alkaloids at the different times mentioned. Since the daffodil is so common in gardens it might be well to consider it in poisonings of mysterious origin (*Jour. A. M. A.*, July 22, 1916, p. 290).

HEXAMETHYLENAMIN IN ANTERIOR POLIOMYELITIS.—It has been shown that hexamethylenamin has no germicidal activities, except in an acid medium. Therefore, it is of special value only in infections of the pelvis of the kidney, ureters, bladder and urethra when the urine is acid. It cannot be expected to exert germicidal activity in the spinal fluid, which is alkaline and hence is of no value in the treatment of anterior poliomyelitis (*Jour. A. M. A.*, July 22, 1916, p. 309).

QUALITY OF SODIUM SULPHITE.—Investigation has shown that while the crystallized sodium sulphite is unreliable, the dried or desiccated form of sodium sulphite is generally of good quality and relatively permanent. A. H. Clark reports experiments showing that specimens of desiccated sodium sulphite keep for years with little deterioration (*Druggist's Circular*, July, 1916, p. 396).

BOOK REVIEWS

GENERAL SURGERY. Volume II of the Practical Medicine Series for 1916. Edited by John B. Murphy, A.M., M.D., LL.D., F.R.C.S. England (Hon.), F.A.C.S., Professor of Surgery in Northwestern University; Attending Surgeon and Chief of Staff Mercy Hospital and Columbus Hospital; Consulting Surgeon to Cook County and Alexian Brothers Hospitals. Cloth, \$2.00. Price of the series of ten volumes, \$10.00. The Year Book Publishers, Chicago.

In the introduction attention is called briefly and concisely to the more notable achievements made in surgery during the past year, and in the following 600 pages the numerous contributions are reviewed.

The reviewer already has had enough experience to know how to perform his task with credit to both the subject and himself. The illustrations are numerous and unusually good for a book of this kind. This volume is of much interest and should be of some value to a great many physicians and surgeons.

SURGICAL AND GYNECOLOGICAL NURSING. By Edward Mason Parker, M.D., F.A.C.S., Surgeon to Providence Hospital, Washington, D. C., and Scott Dudley Breckinridge, M.D., F.A.C.S., Gynecologist to Providence Hospital, Washington, D. C. With 134 illustrations in text. Cloth, \$2.50. Philadelphia: J. B. Lippincott Company, 1916.

In this book the authors have given the nurse just the kind of information she ought to have. In Part I they explain to her what is meant by infection. In Part II they discuss for her surgical pathology to such an extent that she can get a good, clear idea of that subject. They tell her also about the surgical field and the nomenclature to be met with. In Part III they take up the discussion of minor technic in surgical nursing. In Part IV they consider the most important subject of all, the patient. In Part V they discuss the operation, and in the last part (VI) they include what they term "Supplementary Chapters." Here they bring up many little points that are of importance to the nurse in her every-day work.

This work is very well planned. The subject is presented in a thoroughly practical and very interesting manner. It can be recommended as one of the best textbooks for nurses on this subject to be had at present.

DISEASES OF THE EYE. A Handbook of Ophthalmic Practice for Students and Practitioners. By George E. de Schweinitz, M.D., LL.D., (University of Pennsylvania), Professor of Ophthalmology in the University of Pennsylvania; Ophthalmic Surgeon to the University Hospital; Consulting Ophthalmic Surgeon to the Philadelphia Polyclinic Hospital, the Philadelphia General Hospital, and the Orthopedic Hospital and Infirmary for Nervous Diseases. Eighth edition, reset, with 386 illustrations and 7 colored plates. Cloth, \$6.00. Philadelphia and London, W. B. Saunders Company, 1916.

The review of this well and favorably known textbook is almost superfluous. As we have stated before, this work leaves nothing to be desired as a working textbook on ophthalmology for not only the student and general practitioner, but the specialist as well. The well known author is a clinician and

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writer noted for painstaking and thorough scientific work, and his reputation loses nothing in this eighth edition of his *Handbook of Ophthalmic Practice* which has been almost wholly rewritten and revised to meet present day knowledge.

A number of new operations and new methods of treatment have been described, a portion of the chapter on iritis has been rewritten to make it conform to the present knowledge of autotoxemia and iritis secondary to mucous membrane infections, and a number of new illustrations have been inserted.

We have no hesitation in recommending the work as being one of the best in print.

SKIN CANCER. By Henry H. Hazen, A.B., M.D., Professor of Dermatology in the Medical Department of Georgetown University; Professor of Dermatology in the Medical Department of Howard University; Sometime Assistant in Dermatology in the Johns Hopkins University. With 97 text illustrations, and one colored frontispiece. Cloth, \$4.00. C. V. Mosby Company, St. Louis, 1916.

No doubt the author is justified in his surprise at the ignorance of medical men—including surgeons and dermatologists—concerning epithelial growths of the skin. The fact is that there is but very little known at present on this subject; it still remains one of the most obscure in medicine. The introduction of a book such as this is one of the best aids in bringing before the medical profession all that there is known on the subject of skin cancer up to the present.

In this book the author has attempted to gather the latest views on malignant tumors of the skin and to give his personal experience. This experience he obtained in the surgical pathological laboratory and dermatological clinic of Johns Hopkins, and in the surgical, pathological and dermatological departments of the Freedmen's and Georgetown University Hospitals. He has succeeded very well in presenting the subject from these standpoints.

On page 31 we found the word "epidermic" apparently used for epidemic, and on page 176 the author in quoting Bloodgood gives the quotation mark at the beginning of what Bloodgood says but not the one at the end. We regret to have to call attention to little errors such as these.

OBSTETRICS, NORMAL AND OPERATIVE. By George Peaslee Shears, B.S., M.D., Professor of Obstetrics and Attending Obstetrician at the New York Polyclinic Medical School and Hospital; Formerly Instructor in Obstetrics Cornell University Medical College; Attending Obstetrician at the New York City Hospital; Senior Attending Obstetrician at Misericordia Hospital. With 419 illustrations. Cloth, \$6.00. Philadelphia: J. B. Lippincott Company, 1916.

The author realizes that there are already many very good textbooks on obstetrics, but he believes that there is room for another in which the subject is presented in a somewhat different way. In this book the emphasis is laid especially on the practical side of the subject. The theory of obstetrics is not neglected, of course. As much of it is given as the student needs. The sections on anatomy and embryology, both of which subjects the student ought to get more fully in other courses, are entirely omitted. The author gives only the essentials of the theoretical

part, just what the student ought to have or is likely to remember.

For this reason this new book will appeal strongly to a very large class of both students and practitioners. Many of them want and need a work of just this sort: one in which the practical side of the subject is presented quite thoroughly, and in which the theoretical ground work is not left out.

It is surprising to note that in none of the new books on obstetrics that have appeared recently is there mentioned anything about Harrar's method of treating puerperal sepsis by intravenous injections of magnesium sulphate. From his published report and from our own little experience with it we believe that this method of treatment ought to be brought more prominently before the great body of general men. Certainly textbooks ought to contain something with reference to this form of therapy. However, this omission cannot detract from a work so eminently suited to the needs of students and practitioners. This book should, and no doubt will, enjoy immediate wide popularity.

DISEASES OF THE DIGESTIVE TRACT AND THEIR TREATMENT. By A. Everett Austin, A.M., M.D., Former Professor of Physiological Chemistry at Tufts College, University of Virginia, and University of Texas; Present Assistant Professor of Clinical Medicine, in Charge of Dietetics and Gastro-Intestinal Diseases, Tufts College; Physician to Mt. Sinai Hospital, and Berkeley Infirmary, and Assistant to Boston Dispensary. With 85 illustrations, including 10 color plates. Cloth, \$5.50. St. Louis, C. V. Mosby Company, 1916.

Evidently the publishers have spared no effort in their attempt to make this a splendid book so far as their end of it is concerned. Had the author succeeded as well so far as his end of it is concerned, medical literature might really have been enriched by the addition of a new work that would have been worth while.

This subject certainly is not new. Excellent textbooks containing all that there is known at present about the diseases of the stomach and intestines and how to treat them are by no means scarce. A new book on this subject entering a field already well supplied should, therefore, at least measure up to the highest standard of the works that have preceded it. Not only that, but in order to claim distinction it must be better, in some respects at least.

Far from being better in any way this new book is rather below the average. So far as the fundamentals of the subject are concerned there is, of course, nothing new in this book, and what is already known is presented here in a loose, uninteresting manner. The writer's style seems to lack force. Here and there the construction is decidedly faulty. Much irrelevant matter is brought in, the most obvious effect of which is to distract the attention of the reader. Certainly one of the most important essentials of a good book is that it should be well written.

The section on the surgical treatment of the gastro-intestinal canal either should have been omitted or presented by a surgeon. Had it been omitted it would not have been missed. On the other hand, had it been presented by an experienced abdominal surgeon it would have added greatly to the work.

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NUMBER 9

ORIGINAL ARTICLES

URONEPHROSIS: ITS SIGNIFICANCE AND DETECTION *

WITH A REVIEW OF CASES

H. O. MERTZ, M.D.

LAPORTE, IND.

Uronephrosis is the retention of urine in the upper urinary tract. Albarran¹ includes under this term urine retained about the kidney, which condition, because of its usually being but one result of trauma applied to the more common forms of hydronephrosis and capable of diagnosis most often by exploration alone, will not be considered in this discussion.

While uronephrosis, thus limited, long has been recognized as a distinct pathologic condition, it was only when the pathology was advanced. We now know the condition has a definite symptomatology and can be recognized with a remarkable degree of certainty before this end pathology is present. Realizing that the lesion is a progressive one, and that the function of the kidney becomes more and more impaired as the mechanical obstruction to the flow of urine advances, the importance of an early diagnosis is evident. Hence, with it possible to recognize beginning pathology, there becomes a new importance to stasis in the upper urinary tract.

The significance of urinary stasis is dependent on (1) its effect on the physiologic action of the kidney; (2) its effect on the anatomy of the parts involved; and (3) its effect on the residual urine and the results of its absorption.

Its Effect on the Renal Function.—The interference with the renal function is primarily a

mechanical problem only, resulting from the hydraulic pressure present. In the early stages an anemia and atrophy of the secreting tissues occurs,² while, when the intrapelvic pressure becomes 73 mm. of mercury, secretion stops.³ The degree of back pressure present depends on the completeness of the obstruction, its permanency and the rapidity with which it is produced. If but partial obstruction to the outflow exists, and is maintained, the lessening of the renal action is gradual until late in the disease, when complete suppression may occur. During this period of development, however, the elimination of urea and chlorids has been decreasing.⁴ In those cases in which periods of good drainage alternates with attacks of more or less obstruction, the effect on the renal function is much the same, excepting the forces producing the attacks of retention, in themselves may influence the kidney's action. When the obstruction is sudden, complete and permanent, the kidney becomes isolated and its functional value ceases. If but temporary the degree of destruction depends on the time it has persisted. Functionating kidneys have remained after an obstruction lasting from ten to forty days.⁵

In the true traumatic types of hydronephrosis the trauma producing the obstruction—which is most often situated high up in the ureter⁶—usually produces injury to the kidney itself, thus directly affecting its function.

Its Effect on the Anatomy.—The pathology present in any given case of uncomplicated stasis is directly dependent on the degree and

2. Russell: Intermittent Hydronephrosis, Jour. Missouri Med. Assn., September, 1914.

3. Kelly and Burnam: Diseases of the Kidneys, Ureters and Bladder.

4. Adami and Nicbols: Principals of Pathology, p. 816.

5. Stroeckel: Temporary Exclusion of the Kidney After Injury of the Ureter, Zentralbl. f. Gynäk., Jan. 24, 1914. Pinkham reports, Am. Jour. Obst., June, 1915, p. 961, a case in which he had complete obstruction of both ureters, with resulting absolute anuria, for ten days, with recovery following operation, leaving very little serious organic disturbances of the kidneys.

6. Drennen: Traumatic Hydronephrosis, Am. Jour. Surg., 1913, lviii, 879.

* Presented at the Indianapolis session of the Indiana State Medical Association, September, 1915.

1. Albarran: Medecine Operatoire des Voies Urinaires. Cited by Buergher, Am. Jour. Surg., July, 1914, p. 266.

duration of the back pressure. It varies from but a slight deviation in the outline of the lower border of the pelvis and of the calices, to a hydronephrosis of 30 liters.⁷ All of the urinary tract above the obstruction suffers. The calices become knoblike and flattened; the pelvis and

lowed by slight distention and atrophy of the kidney, Corbett,⁹ Keith and Snowden¹⁰ and Scott,¹¹ by their experimental work, demonstrate that in complete obstruction of the ureter seldom, if ever, is there a true primary atrophy, but almost invariably a hydronephrosis results.

Its Effect on the Residual Urine.—The urine normally is a poison, and any stagnation renders it more poisonous. In the case of open hydronephrosis, associated with movable kidney, with a constant cesspool of urine, so laden with poisons, retained within the body, evidences of chronic poisoning must occur. The central nervous system is most affected, the symptoms being severe headache, morbid fears, mental depression, melancholia and even insanity.¹² Also normal urine has a slight bactericidal action, which is very rapidly lost when stagna-



Fig. 1.—Miss K. A normally functioning pelvis and ureter.

the involved portion of the ureter are distended and distorted. The collecting tubules are dilated and the renal parenchyma is compressed and fibrotic. In enormous hydronephrotic tumors, neighboring organs are compressed and displaced.



Fig. 2.—Miss H. shows a dilatation of the tip of the superior calyx with stasis, the result of an obstruction at a. The patient refused exploratory operation.

Marked distention of the pelvis will result from a permanent, partial obstruction of the ureter. While Ransahoff⁸ states Guyon, Robinson and Bradford show conclusively that sudden, complete obstruction of the ureter is fol-



Fig. 3.—Mrs. P. This radiogram was taken with the patient in the recumbent position with the leaded catheter inserted. Residual urine was detected.

tion occurs; hence in this way any stasis renders the tissues more liable to bacterial invasion. Because of the universality of the dropped kidney, enough significance is not attached to this condition. The principal factor contributing to this state of mind of the profession has been the inability to distinguish between the benign and the malignant ptosed kidney—the ptosed kidney that does not produce stasis and the one that does.

The Detection of Uronephrosis.—As is the significance of urinary stasis dependent on the back pressure present, so in turn must the stasis

9. Corbett: Changes in the Kidney Resulting from Tying the Ureter, *Am. Jour. Med. Sc.*, 1912, cxliv, 568.

10. Keith and Snowden: Functional Changes in Experimental Hydronephrosis, *Arch. Int. Med.*, xv, 2, 239.

11. Scott: Experimental Hydronephrosis, *Surg., Gynec. and Obst.*, xv, 3, 296.

12. Suckling: Nephroptosis—Dropped Kidney, *Lancet-Clinic*, Oct. 4, 1913.

7. Mosny, Javal and Dumont: Hydronephrosis Not Diagnosed for Seventeen Years, *Jour. d'Urol.*, January, 1913, p. 128.

8. Ransahoff: *Keen's Surgery*, iv, 219.

be a result of an obstruction. With this in mind the detection of uronephrosis becomes but the recognition of an obstruction present.

The type and capacity of the normal pelvis varies within rather wide limits in different individuals, hence in a unilateral examination, considering size and contour alone as evidences of an early stasis demanding attention, will often lead us into error. While this difficulty is much lessened in the bilateral investigation, the point I wish to make is that convincing evidences of an obstruction in the early case is essential. The attaining the evidences of this obstruction is then the method of determining the presence of stasis early in the process.

In the diagnosis of early uronephrosis, a proper attention to the history is of most impor-

terness. Deep fist percussion, after the method of Murphy,¹⁵ will demonstrate an increase in the intracapsular pressure in certain cases. In the noninfected case of stasis the temperature is normal. The physical examination includes



Fig. 4.—Radiogram of the same patient as Figure 3, the patient in the semi-upright position. The change in the course of the ureter detects a movable right kidney.

tance in directing our attention to the urinary tract.¹³ Pain, always present, usually renal and localized, in the early process, though it may be referred along the course of the ureter, varies from a sense of discomfort to that of a most excruciating character. As the pain produced by the hydronephrosis is the result of the muscular spasm of the hollow viscus attempting to empty itself, and as with the development of the disease the walls become weakened, thinned and less sensitive, it is in the early stages of the disease that the more severe pain occurs.¹⁴ Next in diagnostic value is the physical examination. In the early case, during the interval between attacks, inspection is negative. Superficial palpation may elicit unilateral ten-



Fig. 5.—Mrs. J. Radiogram of a patient whose symptoms suggested renal calculus. We have at a shadow suggestive of a stone in the ureter.

the special methods of investigation—the cystoscope, the ureteral catheter and the Roentgen ray. The next in value in making a diagnosis are the laboratory findings, including urine analysis.

Before discussing the individual cases, I will review the normal pelvis as determined by



Fig. 6.—Radiogram of the same patient as Figure 5, with lead catheters inserted. The shadow lies median to that of the course of the ureter.

pyelography. I choose this method of presenting our cases, as it facilitates their study when classified according to the location of the obstruction, and also because in many of them our diagnosis was made possible by it only.

13. Bevan: Jour. Am. Med. Assn., Dec. 6, 1913, p. 2098.

14. Cabot, Hugh: The Diagnosis and Indications for Operation in Early Hydronephrosis, Jour. Am. Med. Assn., Jan. 4, 1913, p. 16.

15. Murphy: Murphy's Clinics, i, 5, 630.

In interpreting the pyelogram we must remember the anatomic pelvis is not a hollow cavity with rigid walls, but that at rest its walls are in contact and it is as big as its contents only. Thus a pelvis poorly injected may be misleading both in a positive and negative manner.



Fig. 7.—Is the pyelogram of the right pelvis of the patient referred to in Figures 5 and 6. The operative findings were a slightly movable kidney with a constriction of the ureter at the ureteropelvic junction due to adhesive bands.

CASE 1 (Fig. 1).—This is the pyelogram of a pelvis functioning normally. We have the superior convex and the inferior concave borders, the ureter leaving the pelvis at its lowest point. The ureterogram emphasizes the freely movable condition of the ureter and the care necessary in its interpretation as evidence of



Fig. 8.—Mr. B. The ureter entering the pelvis forming an acute angle. The kidney was slightly movable. An intermittent hydronephrosis was present.

pathology. The ureter shows variation in its course in the normal,¹⁶ but the demonstration of a permanent deviation in its lumen is pathologic. The gentle curve of the ureter did not obstruct the flow from the kidney, as the pelvis readily completely emptied itself.

16. Childs and Spitzer: Roentgenography of the Normal Kidney and Its Ureter and Pelvis, *Jour. Am. Med. Assn.*, Sept. 20, 1913, p. 925.

An obstruction, causing retention, may be congenital or acquired, and may occur at any point along the urinary tract.

CASE 2 (Fig. 2).—A woman, single, age 24 years, had constant dull ache, never severe nor aggravated by exertion, over the right lumbar region. Had an appendectomy one year previous to our seeing her. Examination elicited right renal tenderness without rigidity. Roentgen ray, cystoscopy and ureteral catheterization were negative, excepting the latter demonstrated the existing bacteriuria was of bladder origin. Functional activity was normal. Thus far no diagnosis being made, the right renal pelvis was injected. While apparently a dilation of the tip of the upper calyx existed, with a stasis resulting because of an obstruction at a (Fig. 2), and although the pain incident to our pyelographic examination was declared identical to that complained of previously, any operative procedures would have to be exploratory, which the patient refused. Such a condition might be congenital, the result of a passed inflammation, or a tumor.

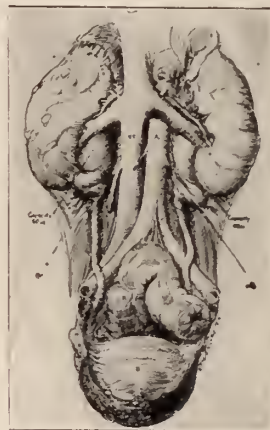


Fig. 9.—Is the diagrammatic illustration of a bilateral hydronephrosis due to normal fascial bands constricting the upper ureter, taken from Kelly and Burnam's *Diseases of the Kidney, Ureters and Bladder*. It illustrates the condition we found at operation in our patient Miss K.

Hydronephrosis is the most frequent lesion of the kidney¹⁷ and is most often associated with some abnormal mobility of this organ. The unstable past of the movable kidney in the diagnostician's favor resulted from the lack of appreciation that the relation of the mobility to the normality of the kidney was not a matter of the extent of the organ's excursion in its wanderings, but was dependent on the degree of interference with the passage of urine from the kidney thus produced.

The physiologically normal pelvis holds but a few drops of urine, and, through muscular action, completely empties itself at each ureteral micturition.¹⁸ The first deviation in the noninfected cases, regardless of cause, which later results in distension and distortion of the pelvis, must be primarily an interference

17. Fowler, O. S.: Early Diagnosis of Intermittent Hydronephrosis with Demonstration of Ureteral Obstruction, *Surg., Gynec. and Obst.*, February, 1912, p. 137.

18. Sanes: The Diagnostic and Therapeutic Value of the Renal Catheter, *Am. Jour. Obst.*, December, 1913, p. 1079.

with this physiologic action. With a man in the upright position, the normal relation of the pelvis to the ureteropelvic junction is conducive to stasis in the lowermost calyx. Any mobility of the kidney must tend to aggravate this relation, thus rendering the physiologic action more difficult.

CASE 3 (Fig. 3).—A housewife, 45, was well until the birth of the second of her seven children, at which time, twenty-one years ago, she had pain in the right side of her abdomen, with some dysuria. Fourteen years ago she had an attack of what was diagnosed as neurasthenia. She has had all these years, and came complaining of, pain in her upper right abdomen, localized definitely just below the ribs. Examination elicited a movable mass in this region. The urine was negative. No difficulty was experienced in ureteral catheterization, but while the flow from the left was intermittent and normal, that from the right was steady until 28 c.c. were collected.

When residual urine is thus determined, there having been no difficulty in passing the catheter, any existing mobility can often be detected and determined the cause of the stasis by employing the leaded catheter



Fig. 10.—Miss E. The kinking of the ureter is due to an aberrant artery passing to the lower pole of the kidney. No urine was collected from this kidney through the ureteral catheter. This patient had had a similar condition on the opposite side.

and the Roentgen ray.¹⁹ With the patient in the recumbent position and leaded catheter inserted, a Roentgen ray was taken during expiration. The tip of the ureter (a, Fig. 3), is at the level of the second lumbar vertebra, and follows a straight line from the bladder to the kidney, showing the kidney at this time well up in place. The patient then assuming a semireclining position, the plate, tube and patient remaining in relatively the same position, a second radiogram was taken (Fig. 4), during inspiration. The ureter has become curved, the tip of the catheter (a, Fig. 4) being opposite the upper border of the fourth lumbar vertebra, at this lateral position, caused by the descent of the movable kidney. This identifies the movable mass and determines the cause of our stasis.

19. Schmidt and Kretschmer: The Diagnostic Value of the Shadowgraph Catheter, Surg., Gynec. and Obst., February, 1912, p. 148.

A stasis due to mobility, however, may be more complicated and difficult of detection.

CASE 4.—A housewife, 48, for the past five years has had attacks of right-sided abdominal pain, increasing in frequency and severity, with radiation down the course of the right ureter. There was tenderness over the right abdomen. The urine contained an occasional leukocyte, but no blood. The primary radiogram (Fig. 5), taken in all cases before instru-



Fig. 11.—Miss H. This ureterogram shows a point of beginning dilatation of the ureter with the dilated portion having a straight rigid condition. The patient is in the recumbent position.



Fig. 12.—Is of the same patient as Figure 11, the patient now assuming the upright position. The point of beginning dilatation is fixed, a, but the dilated portion of the ureter has descended with the kidney caused by the change of position of the patient. At operation the obstruction was found due to cicatricial tissue.

mentation, showed at a (Fig. 5), a shadow suspicious of a stone in the ureter. With the leaded catheters in place, no obstruction having been encountered, a skiagram (Fig. 6) determined the shadow was not from a ureteral calculus. Pyelography demonstrated pathology at the ureteropelvic junction (a, Fig. 7). The ureter enters the pelvis at an acute angle and at a pathologically high position. The regular concavity of the lower border has been lost. Stasis was inter-

mittent, occurring when the kidney in its mobility produced a kinking at the already constricted ureteropelvic junction.

CASE 5.—A man, 29, married, had a history of repeated attacks of right-sided renal colic. Deep fist percussion, posteriorly, elicited extreme pain. The



Fig. 13.—Mrs. W. Beginning stasis in the left pelvis due to a cicatricial band about the ureter at a. The patient is in the upright position.

urine was negative. No obstruction was met in catheterization. The pyclogram (Fig. 8) demonstrated that the ureter enters the pelvis from below, forming an acute angle with the inferior border.



Fig. 14.—Mrs. W. W. shows a narrowing of the vesical portion of the ureter which produced symptoms similar to those of a calculus colic.

A stasis, usually intermittent, in which the mobility of the kidney is the exciting cause, may be due to a constriction of the upper ureter, produced by normal

fascial bands—as when the kidney descends in its own capsule—by cicatricial bands about the ureter, or by aberrant vessels. Only by extreme care are the first and last of these factors not confused. We recently experienced such a difficulty (Case 6), when at operation we at first considered a preoperative diagnosis of probable aberrant vessel causing stasis in the left kidney, verified, although we could not satisfactorily explain the long, regular, S-shaped curve of the ureter, as is shown in Figure 9, a and b, by such an etiology. We are now convinced our obstruction was due to normal fascial bands. Ten months following the first operation, our patient experienced pain on the right side of the abdomen, growing gradually worse until opiates at times were needed. A similar condition was diagnosed relative to the right kidney, which was verified at operation.

CASE 7 (Fig. 10).—A woman, 23, single, had had distress in the back since quite young. In June, 1914, she developed suddenly, without apparent cause, severe pain on the right side of the abdomen, high up, with a tendency to radiation down the course of the right ureter. Urine and the Roentgen ray were negative. Upon exploring the right kidney we found



Fig. 15.—Mrs. C. Ureteropyelograms of the right and left pelvises, the patient being in the recumbent position.

it movable, with an aberrant artery crossing the anterior surface of the ureter, constricting it as it passed to the lower pole of the kidney. In six weeks she left the hospital, free from pain, but three days later she again suddenly developed a similar pain on the left side of the abdomen, not so severe as in the former attack, but with more dysuria. Upon catheterization an impassable obstruction high up in the left ureter was encountered. No urine was passing from this kidney. When $5\frac{1}{2}$ c.c. of cagentos were injected there was regurgitation of the fluid into the bladder. The ureter follows a straight course to a (Fig. 10), where it becomes acutely kinked. None of the fluid entered the pelvis. Kelly and Lewis²⁰ have recently called our attention to the part of the ureterogram at b (Fig. 10), in advanced cases of hydronephrosis of this type, as being but a faint streak connecting the remaining ureter to the pelvis. At operation this kinking was determined the result of an aberrant

20. Kelly and Lewis: Diagnosis of the Particular Form of Hydronephrosis Due to Movable Kidney, Surg., Gynec. and Obst., November, 1914.

artery similar to that previously operated on the opposite side.

Rupert found 70 per cent. of kidneys showed abnormal blood supply, and Ekehorn found in twenty-one of twenty-five cases they were associated with pathology.

There are so many potential factors for pain in the abdomen, physiologically and anatomically so closely related, that to rely on pain alone in a differential diagnosis will often result in error. We thus erred in the following case.

CASE 8 (Figs. 11 and 12).—A schoolteacher, 27 single. She had had periodical attacks of indefinitely located pain in the upper abdomen, associated with vomiting, but no jaundice. The urine was negative. Because pressure over McBurney's point aggravated the pain, the appendix was removed, which did not give relief. The attacks grew more frequent, and were more localized over the left renal area. Upon catheterizing the left ureter, an obstruction well up near the kidneys was met, which was passed. No residual urine was demonstrated. The Roentgen ray was negative to calculi. A pyelogram (Fig. 11) was made, the patient being in the recumbent position. The calices are blunt, the pelvic outline is irregular,



Fig. 16.—Is of the same patient as Figure 15, the patient being in a semi-upright position. The right pelvis drained normally. Stasis is present in the left, the result of an obstruction at a. The right pelvis was injected last.

while the ureterogram shows dilatation of the ureter, beginning at a (Fig. 11), and note the straight, rigid appearance of this dilated portion of the ureter.

The patient then assuming the upright position, we find the corresponding point of beginning dilatation of the ureter (a, Fig. 12) fixed. But with the descent of the slightly mobile kidney, the dilated portion has lost its rigid condition (b, Fig. 12). The remainder of the ureter has drained into the bladder. The ureteral catheter may determine the presence of an obstruction and its location, but it does not tell us its nature. An obstruction capable of being passed may be due to changes in the ureteral walls—strictures, twists, kinks—by cicatricial bands about the ureter, as in this case, by pressure from without and by calculi within the ureter.

CASE 9 (Fig. 13).—A woman, 30, married, had attacks of left-sided abdominal pain, with some dysuria. The attacks of pain were intermittent in character and practically always were the result of unusual exertion. The urine had never contained blood in so far as the patient knows. The urine

was negative. Upon attempting catheterization of the left ureter, an obstruction was met about midway, which was passed with difficulty. Twenty-nine c.c. of residual urine were collected. A pyclogram (Fig. 13) determines the cause of our stasis, an obstruction of the ureter at a.



Fig. 17.—Mrs. T. This demonstrates how stasis in the lowermost calyx may be associated with an unusually high insertion of the ureter into the pelvis. No residual urine was detected by the catheter.

CASE 10 (Fig. 14) gave the history of left-sided backache existing for several years. The radiogram showed suspicious shadows in the area corresponding to the tip of the cystoscope (Fig. 14). A number four ureteral catheter met an obstruction just after



Fig. 18.—Mrs. T. shows the right kidney fixed at an uncommonly low position. Stasis is present and the ureter forms a hairpin-like loop, a, as it descends to enter the pelvis from above.

entering the ureteral ostium, and we concluded we had impacted ureteral calculi at the ureterovesical junction. In attempting to definitely locate the shadows and determine the degree of obstruction of the ureter present, we found (Fig. 14) we were not

dealing with ureteral calculi, but that our obstruction was the result of a narrowing of this portion of the ureter (a, Fig. 14) producing a mild degree of stasis. A most common location for a congenital stricture of the ureter is where it passes through the bladder wall, one of its points of normal narrowing. Where the ureter enters the bony pelvis, another point of normal narrowing, is also a frequent location for an obstruction.

CASE 11 (Fig. 15).—A woman, married, was well until 1906, when she developed sudden, severe pain in the upper abdomen. In 1907 she had a second attack, when the appendix was removed. A third attack occurred in 1908, and in 1911, following, a fourth attack, a second surgeon, thinking the appendix still remained, operated, but not finding the appendix present, he removed a tube and ovary. In November, 1912, when I first saw her, during an attack she passed only 8 ounces of urine during twenty-four hours, which contained a teaspoonful of calcium oxalate sand. Roentgen ray, cystoscopy and



Fig. 19.—Mrs. C. A low lying right kidney, the ureteropelvic junction being opposite the transverse process of the third lumbar vertebra, the patient being in the recumbent position. A 10 per cent. solution of thorium nitrate was used in making this pyelogram.

catheterization were negative, except a slight obstruction was met in the left ureter. In February, 1914, I again saw her, in consultation with Dr. Hall of New Carlisle. During this attack she passed only 8 ounces of urine in forty hours, which again contained an excess of calcium oxalate crystals, but no pus or blood. Roentgen ray was again negative. The same obstruction was met in the left ureter, the urine from this kidney containing the excess of crystals. Figure 15 shows pyelograms of the two pelves taken with the patient in the recumbent position. Each is completely filled; their distinctness of outline is much the same. Each ureterogram is distinct.

The pyelogram (Fig. 16) was taken immediately following, the patient assuming the upright position. The right pelvis has nearly emptied itself. Its outline is indistinct, with no shadow of the right ureter present. The left pelvis is full and distinct, due to

stasis, the result of an obstruction at a (Fig. 16). You will note the distinctness of the ureterogram until it reaches the point of obstruction, the remaining portion of the ureter having drained into the bladder.

When enough trauma is produced by a moving renal calculus to give us colic, there usually results some hemorrhage.²¹ In a similar colic resulting from an intermittent stasis, which may be precipitated by an irritation of an ureteral stricture,²² usually no hemorrhage is produced. Periods of anuria may accompany each. While the relation of crystalluria and calculus formation to stasis is unsettled,²³ the relation in this case of the crystalluria and the extreme colic seems definitely determined when we demonstrate the obstruction producing the stasis.

When stasis is associated with end pathology, the mere recognition of the condition is usually sufficient, as relief demands ablative surgery.

CASE 12.—A woman, 54, married, came to us suffering a dull pain in the upper right abdomen. Several years previously it had been more acute. Frequent urination was present, there being periods of passing large quantities of urine in a short period of time. Palpation was unsatisfactory. Both ureters were cath-

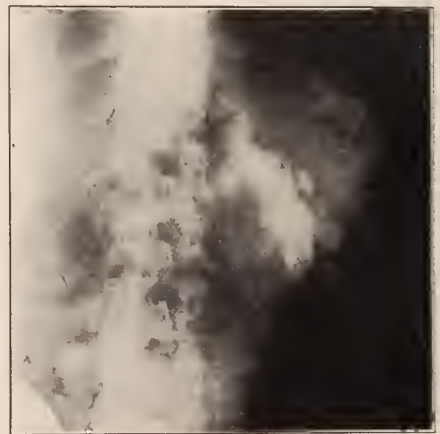


Fig. 20.—Mr. R. shows marked dilatation and stasis of the pelvis, and demonstrates the degree of stasis present, as the patient was assuming the upright position.

eterized without difficulty. The flow from the right was normal, while that from the left was regular and constant until 120 c.c. were collected, making a diagnosis of left-sided hydronephrosis positive.

In man a bilateral hydronephrosis is most frequently associated with an hypertrophied prostate, and in the majority of cases its recognition by ureteral catheterization, and the renal functional estimation, are all the diagnostic procedures necessary and justifiable. A similar condition may result from a urethral stricture. In woman the condition is most often associated with carcinoma of the cervix, when the renal

21. Murphy: The Symptoms and Signs of Renal and Ureteral Stones, *Murphy's Clinics*, October, 1914, p. 871.

22. Barr: Strictures in the Ureter Simulating Kidney Calculous Trouble, *München. med. Wehnschr.*, December 23, 1914, 51.

23. Fowler, O. S.: Ureteral Obstruction Causing Urinary Stasis: A New Etiology in Kidney Stones, with a New Method of Nephropexy to Secure Ideal Natural Drainage, *Jour. Am. Med. Assn.*, Jan. 31, 1914, p. 367.

condition is but a secondary matter. A rather rare cause for bilateral hydronephrosis was present in the following case.

CASE 13.—A woman, married, 38, German. She had had a uterine suspension and bladder fixation to the anterior abdominal wall while in Germany. She came to us suffering pain over both renal areas, mostly on the right side, with periods of passing large quantities of urine in a short time. Cystoscopy demonstrated this interesting condition: The bladder capacity was normal, but the introduced cystoscope immediately came in contact with bladder wall. The interureteric ridge was hypertrophied and made an exaggerated curve, the convexity being toward the neck of the bladder. The ends of the ridge extended into what were at first thought to be two diverticula of the bladder, with unusually large openings. At the tips of the ridge the ureteral orifices were found, which were easily catheterized. Clear urine flowed from each catheter in steady drops until 120 c.c. were collected from the right kidney and 110 c.c. from the left. She had a bilateral hydronephrosis of large size due to an obstruction, the result of a surgical operation on the bladder.

Figures 17 and 18 are pyelograms of the same patient.

CASE 14.—A woman, schoolteacher, 33, married. She had had for years a pain across the small of the back. Early in her history it was more severe on the right side, but lately has been more on the left side. Had an indefinite abdominal pain during this time. The urine contained 200 pus cells to the one-eighth objective, and an occasional blood cell. Physical examination elicited a movable mass in the left side of the abdomen which was readily determined kidney. The urine from this kidney contained fifty pus to the field, but no residual urine was demonstrated by the catheter. A pyelogram (Fig. 17) was then made, with the patient in the horizontal position. The upper calyx and portion of the pelvis above the ureteropelvic junction gives a markedly dense shadow when compared to that of the portion below this opening. This difference in density of the shadow is due to the dilution of our injected fluid by the residual urine in the lowermost portions of the pelvis, another evidence of stasis in certain pelvises. The pelvis is long and narrow. The normal curvatures of the upper and lower borders are lost. More than half the pelvis lies below the ureteropelvic junction. The kidney is large and freely movable.

Figure 18 is the pyelogram of the right pelvis of Case 14. Upon palpation a mass was felt in the right iliac region. It was fixed and painful. The ureteral catheter met an obstruction at a (Fig. 18). Had we but relied on the straight line of the leaded catheter, not being able to pass this point, we could have called it a dystopic kidney. The shadow of the injected ureter, forming the hairpin-like loop (a, Fig. 18) at so high a position, and its entering the pelvis in the manner it does, demonstrates the kidney has moved to its new location from a higher position. For a movable kidney to become fixed at so low a position is uncommon. The calices are obliterated, the pelvis is distorted and stasis is present. The ureteropelvic angle (b, Fig. 18) is reversed, the ureter passing upward from the superior border of the pelvis.

CASE 15 (Fig. 19).—A woman, 39, married. In 1905, following the birth of her third babe, she developed an ache in her upper right abdomen, which lasted three months. In 1914 it recurred, located lower down in the abdomen, and associated with some dysuria. It was constant, and was aggravated by jarring. Palpation elicited extreme tenderness posteriorly over the renal area, high up. Abdominal palpation determined same tenderness, with a suggestion of a movable mass over McBurney's point, which we interpreted bowel. Urine showed occasional pus and many bacteria. Upon catheterizing the right ureter, the flow of urine was steady until 26 c.c. were collected. We have a movable kidney (Fig. 19) lying low in the abdominal cavity, with the retention of a small amount of urine in its pelvis.

CASE 16 (Fig. 20).—A carpenter, 32, married, had a constant ache over the left loin, made worse by exertion. Has had some fever. The urine contained pus, many colon bacilli, but no blood. Physical examination elicited some tenderness over the left kidney. Upon attempting cystoscopy an impassable urethral stricture was encountered. Following dilatation, he was cystoscoped and both ureters catheterized. From the right 25 c.c. of clear urine were collected, while from the left 80 c.c. of pus-laden urine were withdrawn. The phthalein output of the right kidney was normal. The appearance from the left was delayed to forty minutes, with but 20 per cent. in two hours. The condition was decided surgical, and a pyelogram was made to determine the degree of involvement present (Fig. 20). The pelvis is greatly enlarged, the calices are dilated and knob-like. This pyelogram was taken with the patient in the upright position, showing the degree of stasis present, as the ureter has drained.

A study of our cases seems to emphasize the following:

1. The gradual development of uronephrosis and the possibility of its early recognition, when constructive surgery may still suffice.
2. A urine analysis is of very little value in eliminating these cases.
3. Too much reliance on the symptom pain alone, will often lead us astray in our diagnosis.
4. Pyelography has a definite field of usefulness in the condition early in the process, but when end pathology is present it is seldom necessary or justifiable.²⁴
5. In interpreting the pyelogram, if the early case of stasis is to be recognized, distention and distortion of the ureter and pelvis cannot always be relied on, but a deviation in the flow of urine from the kidney to the bladder must be looked for, as an interference with this physiologic action always precedes anatomic change in the noninfected case.

24. Braasch: Pyelography (Pyelo-Ureterography): A Study of the Normal and Pathological Anatomy of the Renal Pelvis and Ureter.

6. Extreme care must be exercised in interpreting at operation, lesions of the upper ureter producing stasis. In the pyelographic interpretation in the early case it would appear a close study of the comparative location of the ureteropelvic junction to the pelvis, and the angle at which the ureter enters the pelvis, is necessary.

In closing I wish to acknowledge the hearty cooperation of my associates, and especially am I indebted to Dr. Simon, whose excellent radiographic work has made this study possible.

DISCUSSION

DR. H. G. HAMER, Indianapolis: Dr. Mertz deserves to be complimented on his presentation of this paper. He shows the necessity for careful diagnosis in suspected kidney lesions. As to the significance of uronephrosis, I have nothing to add to what Dr. Mertz has stated, except to emphasize the importance of thorough and complete diagnosis in this class of cases.

We frequently are called to examine a patient where some surgical operation is contemplated and the surgeon wishes to exclude the kidney as a possible factor in the production of a part of the symptoms. Not infrequently is the request made that we catheterize the ureters in order to clear up some doubtful feature of the case. Now it is often impossible to obtain information of much value by ureteral catheterization and analysis of the separate urines alone. It is true that in cases of pyuria and hematuria the source of pus or blood may be quickly demonstrated, but in the class of cases under discussion, those suffering from urinary stasis, ureter catheterization alone will often be of little value.

It is by making use of the cystoscope, ureter catheter, Roentgen-ray and function tests that we can obtain information necessary to make a complete diagnosis. Routine examination is important. The technic of the necessary procedures is not difficult, but we are often hindered by lack of facilities. Success depends largely on being well equipped.

Cystoscopy and ureteral meatoscopy, ureteral catheterization and the collection of urine from the kidneys for separate analysis, ascertaining the function of the separate kidneys by the phenolsulphonephthalein test, radiography of the kidney regions first with leaded catheters inserted, the injection by gravity of collargol, argyrol, cagentos or neutral thorium nitrate into the kidney pelvis for a second radiogram in the prone position, and in the upright position a third exposure in suspected ptosis. To

my mind it is the careful following out of these procedures that give us the best evidences on which to make a diagnosis.

It is not necessary to include all of these procedures in every case, but we should be prepared to put each case "through the paces" until we discover the cause of the trouble.

The dangers arising from the injection of opaque solutions into the kidney have largely disappeared since the gravity method has been adopted. Collargol, which has been used most, sometimes causes considerable irritation and is quite toxic, and deaths due to its use have been reported. Efforts have been made to find a more suitable solution—one capable of giving good shadows without producing irritation or toxic effects. Argyrol in 10 to 15 per cent. solution generally gives a fairly good shadow, but is unreliable, sometimes giving no shadow at all. Cagentos has been used quite extensively, but has the disadvantage of being too heavy a solution to flow freely through a ureteral catheter. The silver iodid emulsion proposed by Kelly has not found favorable acceptance. Recently the neutral solution of thorium nitrate and sodium citrate has been advocated as an excellent solution for pyelography (*Jour. Am. Med. Assn.*, June 26, 1915). It possesses the advantages of being a clean, clear solution which flows readily through the catheter, and it is said to be nontoxic and nonirritating. In addition, the cost is small compared to other substances formerly used for this purpose. The shadows are much clearer than those obtained by the use of collargol or other solutions.

DR. P. E. MCCOWN, Indianapolis: I did not hear the first of Dr. Mertz' paper, but I think it is better to point the way to a diagnosis of a uronephrosis before such a condition arises. Within the last two years I have come in contact with a number of cases having persistent, frequent urinasia. This is especially true in women. Any endeavor to correct the condition with emollients had been unsuccessful. A cystoscopy was done and an obstruction found in some portion of the ureter in each case. I think that in most cases unrelieved pain and frequent urination is an indication that a cystoscopy and catheterization of the ureter should be done at once. When the urine is found to be clear and there is no apparent cause for pain in the female from displacement of the female organs, or in the male from prostatic conditions which are very common, pay more attention to cases of urinary frequency and eliminate the extraneous conditions, such as the female organs in the woman and the

prostatic organs in the male, we will frequently find an obstruction of some kind. I have three cases at the present time. One young lady came to me day before yesterday. I have been able with difficulty to get a catheter through, and it disclosed the presence of streptococci. As to how far it has gone I cannot say as yet. She may already have tuberculosis. The lymphocyte count showed 50 per cent. of white cells. We have injected her kidney today and hope it will not show tubercle bacilli. Her urine is clear and shows streptococci. It may be too late. We have not made a pyelograph, but she may already have tuberculosis of the kidney.

Another case in my care lasted for three years. I think most of the cases that Dr. Mertz has shown have given long histories of pain but I believe we should look into this pain in the side earlier. Patients coming to the surgeon are constantly operated for appendicitis, gallbladder conditions, etc., whereas a simple cystoscopy and urinary examination would have saved considerable trouble.

A patient came to me yesterday morning who had had four operations performed. Uterine curettement or something of the kind, appendix removed, an ovary and tube removed and finally has passed a kidney stone or two, and some doctor, without Roentgen ray, opened her side and took out a kidney, examined it, saw nothing wrong and put it back. The kidney stone increased. I believe if in the first place catheterization of the kidneys and a cystoscopy had been done she would have been spared these four operations. She fights shy of another operation and is still passing the kidney stones. She simply will not be operated again. I am making a desperate effort to stop the kidney stones, but there is infection in both kidneys and stones are passing from both.

I think we should look into the bladder and kidney pelvis earlier in all abdominal conditions. I am not acquainted with abdominal surgery, but I feel that men are recognizing the importance of early examination of the kidney pelvis.

About a year ago I had a young man come to me, a friend having made the diagnosis. I was told by this friend that he believed the patient had a kidney trouble. We examined the kidneys and found that one seemed to be tender. I was not sure it was not the gallbladder, but a cystoscopy revealed an obstruction. A catheter was passed 2 or 3 centimeters at first. After four attempts to get a catheter through I finally succeeded, and a great quantity of pus laden urine was passed. That was all that was neces-

sary. Dilatation of the ureter will save a very serious condition later on.

DR. MERTZ (closing): I have nothing further to say other than to emphasize the need of an early diagnosis of these cases which are so common. If we do not diagnose early we are going to diagnose too late, when only ablative surgery will be possible.

THE SEQUELAE OF ORAL FOCI OF INFECTION

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Clinical evidence confirmed by radiographic examinations show how close is the relationship between the pathology of the mouth and that of the body as a whole. We now recognize that many of the chronic infections such as arthritis in the various forms including arthritis deformans; synovitis, and muscular rheumatism, myocarditis, endocarditis, iritis and nephritis may be the result of an infection, the portal of entry for which is in the mouth. In addition to these easily recognized diseases, patients with symptoms such as vertigo, dyspnea, palpitation of the heart, high blood pressure, neuritis, insomnia, albuminuria, all probably due to one of the above mentioned diseases, improve after the proper treatment for demonstrable mouth lesions.

Until the advent of the radiograph in the diagnosis of oral foci of infection these infected sufferers were treated only in a palliative manner, because the internists, even by their most conscientious efforts, were unable to locate the etiological factors of these chronic or subacute infections.

At the present time his routine in treatment of these conditions may first be palliative, or eliminative, which is merely a temporary arrest of the subacute condition, followed, or concomitant with a careful examination of tonsils, ethmoid, frontal, maxillary and sphenoidal sinuses, and a radiographic examination of all teeth and their supporting alveolar process.

It is a safe assumption to make that seventy-five per cent. of all so-called autotoxic sequelae are traceable to infected sinuses, crypts of tonsils, periapical, or pericemental infections.

With the knowledge that the portals of entrance to the alimentary, respiratory, and genito-urinary tracts, therefore nearly all mucous

membrane lined organs, ducts and tracts are the oral and nasal cavities we must logically reason that these cavities must be free from active, virulent infection if the body tissues and fluids are to be considered non-pathologic or normal.

The normal adenoid and tonsils are lympho-vascular tissues which act as fillers to catch the microorganisms which are taken with each inhalation.

An absorption of toxins produced by the more virulent germs thus arrested produces a condition in these tissues which is a reaction to toxic irritation, called inflammation, characterized by pain, heat, redness, swelling and impaired function.

Histologically, the changes which occur in these areas of inflammation are hyperemia, stasis, changes in their vascular supply, the blood and walls of their small vessels, productive of exudates.

Pathologically, in these fertile fields the cocci multiply without much tissue change, then the mononuclear leukocytes migrate to the inflamed tissues, more exudation occurs which is productive of an excellent culture media. The polymorphonuclear leukocytes then invade the field, cocci farther multiply and penetrate the deeper structure of the glands through the lymph channels and simple endothelial capillaries, and the polymorphonuclear leukocytes begin the ingestion of the virulent cocci. Practically all of these over zealous polymorphonuclear leukocytes become pus cells on account of the toxins of the ingested germs causing their nuclei to fragmentate, which means death to the cell. Infected, suppurating crypts or abscesses are present after a period of forty-eight hours of progressively lowered pathological resistance.

As a sequence to this pathological degeneration of tonsils and the pharyngeal adenoid, a granulomatous inflammation of a suppurative type, which tends to metastasize, is the end result.

When the tonsils and adenoid have reached this chronic pathological state, the internist insists upon tonsil and adenoidectomy to relieve the patient of metastatic infection.

A granulomatous, suppurative periapical, or pericemental inflammation is equally metastatic if not to a greater degree, for we have less drainage here than in the tonsillar infection.

The so-called blind periapical suppurative inflammation, or abscess is at least fifty per cent.

more metastatic, because the microorganisms and their resultant toxins, and pus are circumscribed by a vascular pyogenic membrane. Therefore all of the toxins and some of the cocci filter by osmosis directly into the circulation.

The discharging abscess is practically equal in virulence to the cryptic infected tonsil, because a portion of the pyogenic material is drained into the mouth and either spit out with the saliva or swallowed. The pus which is swallowed is digested by the gastric juices to a degree, and eliminated through the alimentary and renal tracts. However, there is always an absorption of toxins from all foci of infection, therefore it is our duty as a preventive measure to eradicate all foci of infection from the mouth.

Conservation of teeth is our great mission in dentistry, but health conservation is our first duty to our clientage. Therefore we must locate and eradicate all infection from the oral cavity. This does not mean tooth extraction in each case of focal infection, but rather the eradication of the cause of such infection, either by therapeutics and cure of the abscess, oral surgical interference, or the resection of denuded, pitted and infected apical cementum and mechanical planing, or scaling of the precipitation from the cementum of tooth roots in pyorrhea.

If the prognosis of any tooth or teeth is bad and therapeutics, oral surgery or prophylactic pyorrhea treatment will not cure the diseased tooth or teeth, they should be extracted and their sockets thoroughly and carefully curetted free of all pyogenic membrana, the sockets irrigated with normal saline solution and sponged out with 10 per cent. tincture of iodine. A healthy blood clot will form in sockets thus treated and normal fibroblasts from the endothelial cells will be laid down in the clot, healthy granulation will result, osteoblasts will build new, healthy bone at the apical end of the sockets and osteoclasts will remove the free orificial process and finally the socket will close and the mucous membrane will seal the aseptic area.

We fully realize that our pulp canal treatment and fillings of the past were far from perfect, but today we can see no excuse for inefficient work along these lines. Each tooth to be, or which has previously been devitalized must be radiographed. If the previously devitalized tooth is diagnosed by the radiographer as a focus of infection the dental operator must be

able to treat the case successfully or extract the offending member. If the tooth in question has not been devitalized and is to be utilized as an abutment for a bridge and the radiograph shows a decidedly inaccessible pulp canal, devitalization should not be performed, but a Carmichael attachment or half crown should be used to support the bridge. If devitalization and pulp canal filling is practicable and cosmetically preferable, the pulp tissue should be removed under absolute aseptic precautions. A sterile wire should be inserted into the sterile canal, temporarily sealed into the tooth and a second radiograph made to see if the apical foramen has been reached. If it has not, the accepted technic of reaming out the canal with barbed broaches and 45 per cent. sulphuric acid, frequently neutralized with sodae bicarbonate solution *a la* Callahan should be employed, the wire readjusted and another radiograph taken to confirm the result. If the wire has reached the apical extremity of the canal it should be removed, the pulp chamber and canal should be flooded with 70 per cent. alcohol, thoroughly dehydrated, and filled with a material which will seal the apical foramen and the dentinal tubuli. Possibly the best pulp canal filling is sterile gutta percha points which are made plastic by sixty or more pumping thrusts into the canal which contains a solution of rosin gr. viii to chloroform fl. dr. iii. This pumping of the points into the canal will partially dissolve the points and force the rosin, chloroform-gutta percha solution to the apex, filling the accessory cemental foraminae, as demonstrated by the author of the technic, Dr. Callahan. The semi plastic material should be manipulated and packed into the canal until the excess of chloroform has evaporated, leaving a firm, non shrinking, adhesive canal filling. After the canal has been thus filled a third radiograph should be taken to confirm the final result.

Sterile linen should be used to protect the patient's clothing. The operator's hands, all instruments, dressings, gutta percha points, cotton and everything used in the operation must be sterile. The rubber dam should be securely adjusted and its exposed surface and the tooth or teeth to which it is fixed should be sterilized with 70 per cent. alcohol before the filling operation is begun.

Surgical cleanliness in this, as well as in all other dental operations must be maintained. It requires but a few moments of time to perfect the technic and the ultimate results are more than worthy of the time required.

Such attention to details will insure aseptic results and the elimination of the possibility of subsequent foci of infection, which means disease prevention so far as our field of endeavor is concerned.

THE Christian Scientists are making a great ado about the effort on the part of members of one of our district medical societies to obtain information from legislative candidates concerning the attitude to be assumed by them in connection with requirements for the practice of medicine in the State of Indiana. Printed circulars are sent forth from Indianapolis with the reproduction of the letter sent out by the secretary of the medical society, and a reproduction of some rather sarcastic comments by a Kokomo newspaper that has a reputation of being a little lopsided on many questions that demand nothing more than a little common sense to settle satisfactorily. As a matter of fact, all that the medical profession has asked of candidates for the legislature is that they shall establish a standard of fitness for the practice of medicine, just as a standard of fitness is established for many other things. If a man is going to treat the human body, he ought to know something about the human body, and he can not obtain this knowledge by reading Mrs. Eddy's Science and Health, and Key to the Scriptures, nor can he obtain such knowledge through a six weeks' course of massage training in a chiropractic school. Nothing more is asked than that the person who is licensed to practice medicine must have a suitable preliminary education, and that he shall have studied medicine and the allied branches relating thereto a sufficient length of time to make him acquainted with fundamental facts. When he has done this, he will have shown some fitness for the practice of medicine, and common sense as well as the protection of the people indicates that this method of securing competency is fair and just. As the medical men say in their letter sent out to candidates for legislature, "No exemptions should be made, and no discriminations permitted, and all should be measured with the same stick." We hope that the medical men of Indiana will make their influence felt among those who are candidates for the legislature, for the surest way to accomplish results is through the medium of politics.



GEORGE F. KEIPER

President Indiana State Medical Association, 1915-1916



L.J. WILLIEN
FIRST VICE-PRESIDENT
TERRE HAUTE



F.A. CHENOWETH
SECOND VICE-PRESIDENT
WINCHESTER



WALTER F. CARVER
THIRD VICE PRESIDENT
ALBION



CHAS. N. COMBS
SECRETARY-TREASURER
TERRE HAUTE



W.R. DAVIDSON
CHAIRMAN MEDICAL SECTION
EVANSVILLE



JOHN H. OLIVER
CHAIRMAN SURGICAL SECTION
INDIANAPOLIS



LAFAYETTE PAGE
VICE-CHAIRMAN EYE, EAR, NOSE
AND THROAT SECTION
INDIANAPOLIS



E.M. SHANKLIN
SEC. EYE, EAR, NOSE & THROAT SECTION
HAMMOND



DAVID ROSS
SECRETARY SURGICAL SECTION
INDIANAPOLIS

THE FORT WAYNE SESSION

The Indiana State Medical Association will hold its annual session in Fort Wayne Wednesday, Thursday and Friday, September 27, 28 and 29. This is the third time that the Association has met in Fort Wayne, the first time being in 1896 and the last time in 1910. Many changes have taken place since the Association last met in Fort Wayne. Now the Association has nearly 3,000 members, and Fort Wayne has a population of 90,000 and exhibits a growth in both population and enterprise that makes the city conspicuous among the noteworthy cities of the Middle West.

The Fort Wayne Medical Society, with over 100 members, welcomes the members of the Indiana State Medical Association with a warmth of cordiality and wealth of hospitality which it is hoped will go far toward making the coming session a notable one in a social way and go a long way toward creating enthusiasm and interest in the scientific work.

THE EARLY HISTORY OF FORT WAYNE

Fort Wayne is the metropolis of northern Indiana, and is called "the summit city" because it occupies the highest of the land in Indiana. Its elevation above sea level is 775 feet. Every schoolboy is familiar with the fact that Fort Wayne is situated at the junction of the St. Joseph and St. Mary rivers, which unite to form the Maumee. He is also familiar with the fact that Fort Wayne is rich in aboriginal tradition and of absorbing historic interest. Long before the foot of the white man had pressed its virgin turf it had existence as Ke-ki-on-ga, the "central city" of the once powerful and warlike Miamis, who held dominion over the region. It was early known to the intrepid French explorers and voyageurs, who penetrated the great wild empire of the Northwest in the seventeenth century, and there is almost conclusive evidence that the brave and enterprising La Salle had passed through Ke-ki-on-ga on one of his expeditions to the Southwest.

The military importance of the place was early recognized by both French and English, and each nation at different times in the eighteenth century, prior to the coming of Americans, had built forts and maintained garrisons, where now stands Fort Wayne. It was not, however, until 1794 that the Fort Wayne of today had its real beginning. In the fall of that year Gen. Anthony Wayne, after inflicting crushing defeat on the hostile Indians at the

battle of Fallen Timbers, near Maumee, Ohio, came to Ke-ki-on-ga, and on an eminence overlooking the confluence of the St. Mary and St. Joseph rivers, threw up the stockade that was given his name and established the authority of the American government. Fort Wayne remained for a long time a military post and trading point with the Indians, and passed through the savage conspiracies and the trials and dangers of the Indian wars incident to the conflict between the United States and Great Britain in 1812, and saw finally the power of the savages in the region broken forever.

Then came the period of civic development. About the fort had sprung up a considerable frontier village, and at the close of the war with Great Britain agricultural settlers began to occupy and cultivate the land. In 1822 Fort Wayne was platted as a village and in 1829 it was incorporated, having at that time a population that was probably less than 300. In 1840 Fort Wayne, with a population of 2,080, was chartered as a city, and three years later the Wabash and Erie canal, a great engineering feat in those days, was completed, and Fort Wayne's rapid progress to real greatness began in earnest. Early in the fifties opened the epoch of steam railroads, and with them began the industrial development that has made Fort Wayne one of the great railroad and manufacturing centers of the old Northwest.

FORT WAYNE'S ACHIEVEMENTS

The achievements of Fort Wayne in commerce, in manufacture, in education, in religious affairs, in civic progress, in public improvements, and all things else that operate to fix her status as a prosperous and progressive city and a cultured and ambitious community, have been notable.

Fort Wayne never has had a "boom," and it has never stopped growing. It has no slum district. It is a city of homes, the proportion of home owners to its population being greater than any city of its class in the United States.

The city proper covers 15 square miles of territory, its greatest distance north and south is $4\frac{1}{2}$ miles and from east to west $3\frac{3}{4}$ miles. Within its corporate limits it has 9 miles of rivers—5 of the St. Mary's, 2 of the St. Joseph and 2 of the Maumee. All of these river banks within the city are owned by the city and are to be parked and boulevarded.

RAILWAYS AND STREETS

Fort Wayne has seven lines of steam railway and an equal number of electric interurban railways, all of which radiate in every direction from the city, and many miles of perfectly constructed and well-operated city lines. There are 70 miles of well-paved streets, of which over half is of asphalt and the balance vitrified brick,

choices and best preserved spots. It is located on the St. Mary's River, whose meandering course encloses it wholly on two sides and partly on a third. A large natural grove of stately forest trees affords a picnic ground of rare beauty and attractiveness, to which the art of the landscape gardener has added such artificial embellishments as contribute to convenience and enjoyment.



ANTHONY HOTEL—HEADQUARTERS INDIANA STATE MEDICAL ASSOCIATION, FORT WAYNE SESSION

PARKS

Fort Wayne has the best distributed system of parks of any city in the state. The parks are twelve in number, with four others now being acquired, which will place a park within a ten-minute walk of the home of every citizen in Fort Wayne.

The largest of the city's parks, Swinney Park, contains 51 acres, and is one of Nature's

Foster Park, a recent addition to the park system, is a beautiful natural park of nearly 50 acres on the bank of the St. Mary's River in the southern section of the city, donated to the city for park purposes by the Foster brothers. A wealth of native trees and picturesque river views makes this one of the most attractive spots in the city.

It is worth noting that in the Fort Wayne parks the pleasure of visitors is not marred by "keep-off-the-grass" signs.

Robison Park, a beautiful park maintained by the street car company, is situated on the St. Joseph River, 7 miles north of the city. It is reached by a double-tract electric line over a singularly beautiful route, which for the most part follows the course of the river and is flanked on the other hand by the old canal. It is a beautiful tract of 240 acres, the larger part of which is wooded. All modern features of a summer resort are found there, including a

training school. It also has the Indiana School for Feeble-Minded Youth, the Concordia College, the Bible Training School, the Art School, two business colleges, and numerous smaller educational institutions. There are 55 churches, of which 28 are Protestant, 12 Lutheran, 13 Catholic and 2 Jewish. Of parochial schools the Lutherans maintain 9 and the Catholics 10.

Hospitals.—The hospitals are four in number, well located from a sanitary standpoint, modern in appliances and progressive in practice. The oldest institution is the St. Joseph



ELKS' CLUB—GENERAL MEETINGS, SECTION MEETINGS, AND COMMERCIAL EXHIBIT

large and perfectly appointed theater. It is a favorite resort not only of Fort Wayne residents, but excursionists from all accessible points.

Fort Wayne has taken up the playground movement in earnest, and already there are several spacious playgrounds in various sections of the city, all equipped with appliances for the entertainment and amusement of the children and properly safeguarded by capable attendants.

Schools and Churches.—Fort Wayne has 22 ward schools aside from the high and manual

Hospital, founded in 1869, and recently augmented by a very large fireproof five-story addition containing all the latest improvements in hospital construction. It has a capacity of 200 beds, caring for from 1,800 to 2,500 medical and surgical cases yearly. The Hope Hospital has a capacity of 75 beds and cares for from 900 to 1,000 cases each year. A model training school for nurses is a part of the institution. Money has been raised and a site procured for a new Hope Hospital which is to be a modern institution. The Lutheran Hospital is a comparatively new, entirely up-to-date, fireproof

structure, with 125 beds and cares for from 1,500 to 2,000 patients each year. It maintains an excellent training school for nurses. St. Roche's Hospital, on a beautiful, healthy, high spot, overlooking the city, is open for consumptives only. The isolation hospital, located just outside of the city limits, is a commodious brick structure, having all modern, necessary and scientific appointments for the detention and treatment of virulent contagious diseases. "Fort

Fort Wayne architect and was built without a dollar of "graft" going into it. The United States postoffice, the city hall, the high school building and the Carnegie Library are imposing, and examples of good architecture. The new nine-story Anthony Hotel is a monument to the enterprise of Fort Wayne citizens who own it, and it is rated as one of the best managed hotels between New York and Chicago. The Young Women's Christian Association



COMMERCIAL CLUB, HOUSE OF DELEGATES, COUNCIL, AND SCIENTIFIC DEMONSTRATIONS

Recovery" is a tuberculosis camp doing wonderful work in caring for tuberculous patients. A modern tuberculosis hospital is to be built at the camp in the near future.

Public Buildings.—The public buildings of Fort Wayne confer a distinction of which the city is pardonably proud. The Allen County courthouse, erected at a cost of \$1,000,000, is one of the most beautiful specimens of architecture in the country. It was designed by a

building is modern in construction and efficient in management, and nearly one-half million dollars has been raised recently for the erection and equipment of a new Young Men's Christian Association building. The new Scottish Rite Cathedral, the finest building in the world devoted exclusively to Scottish rite masonry, is beautiful in design throughout, and it, with the courthouse, form two conspicuous "show places" of a city that boasts of many fine buildings.

Some Large Commercial Enterprises.—

Among the big business enterprises of Fort Wayne are the Pennsylvania Railroad, which disburses about \$250,000 each month to over 3,000 men; the Bass Foundry and Machine Works, the largest car wheel manufactory in the world, employing from 1,200 to 1,500 men, and having a monthly pay roll of \$70,000; the Fort Wayne Electric Works (General Electric Co.), employing nearly 5,000 men and paying

CLUBS

The Commercial Club represents the associated business interests of the city, and it is also one of the social clubs of the city. It occupies a well-appointed building.

The Elks' Club also is one of the social clubs of the city, where hospitality is dealt with a lavish hand, and the new club house of the Moose is another place for fraternal and social gatherings.



ALLEN COUNTY COURT HOUSE

out in wages each month the sum of \$250,000; the Fort Wayne Knitting Mills, the largest manufactory of hosiery in the United States, the Thieme Bros. Silk Hosiery Mills; and the Fort Wayne Steel and Iron Mills, employing about 500 men and having a pay roll of over \$40,000 per month. A large number of other business enterprises, each employing from 100 to 300 men, also add to the commercial activity.

The Scottish Rite Cathedral partakes of many of the features of a club, and is constantly open to members of the order and their friends.

The Fort Wayne Country Club is an attractive spot about 3 miles west of the city on the line of the Fort Wayne and Northern Indiana Traction Company. The grounds cover nearly 80 acres, and here the recreation seeker can

find health and enjoyment in golf, tennis, hand ball and other sports. An attractive club house furnishes baths, refreshments and such other conveniences and accommodations as go with a place of that character.

undone which will add to the comfort, pleasure, and profit of all who attend. The scientific program is an interesting one, and the Committee on Arrangements has provided social features which will add to the pleasure of the visitors



FORT WAYNE'S WELCOME

For this year's session of the Indiana State Medical Association Fort Wayne extends a cordial welcome to all the members of the Association and their friends, and nothing will be left

and general success of the session. The ladies especially are invited, and entertainment has been arranged for them for the period when scientific meetings are in session. The Commercial Club, the Elks' Club and the Scottish Rite Cathedral will be open to visitors, and

cards entitling the owner to the privileges of these clubs may be obtained through the Committee on Arrangements. The hospitals will keep "open house" for physicians and extend cordial welcome.

Association come early, with a view to attending the smoker on Wednesday night, September 27, and for the further purpose of being on hand for the opening of the scientific meetings early the next morning. The Committee on



Fort Wayne is noted as a good place to go, on account of the cordiality and generous hospitality afforded to all visitors, and the welcome which the visiting doctors receive will be in keeping with the reputation established. It is desired especially that the members of the

Arrangements has provided no entertainments, clinics or junketing trips to interfere with the scientific meetings which are considered first in importance, but those visitors who care to come early or stay over for the purpose of visiting some of the hospitals, large manufacturing

establishments, public buildings or other places of interest, will be welcomed and afforded every facility for carrying out their plans. The hospitals are of particular interest to medical men, and Fort Wayne has reason to be proud of her hospitals and the character and amount of work done in them. As a surgical center Fort Wayne is second only to Indianapolis, and members of the Association who are in the city before or immediately following the annual session of the State Medical Association can be assured of witnessing some excellent surgical and medical clinics.

room proper of the Elks' Club, will be held the meetings of the Surgical Section. The meetings of the House of Delegates and Council and the Scientific Demonstrations will be held at the Commercial Club on Harrison Street, one-half block distant from the Anthony Hotel and one block from the Elks' Club.

ENTERTAINMENTS

Fort Wayne is recognized as a city where sociability is a predominant feature, and visitors to the coming session of the Indiana State Medical Association can be assured of a warm



MAIN BUILDING, INDIANA SCHOOL FOR FEEBLE-MINDED YOUTH

PLACES AND TIME OF MEETINGS

The Anthony Hotel will be the general hotel headquarters of the Association. The entire Elks' Club, about one-half block distant from the Anthony Hotel on West Berry Street, has been turned over to the Association for the various social and scientific meetings. On the main floor of the Elks' Club will be the registration booth, and in the General Assembly Room on the same floor will be held the general meetings, the meetings of the Medical Section and the "Smoker." On the second floor of the Elks' Club will be found the commercial exhibits and the meetings of the Section on Eye, Ear, Nose and Throat. On the third floor, or in the lodge

welcome everywhere. The Fort Wayne Medical Society has provided social features that will not conflict with the scientific meetings, but fill in the spare time and add to the spirit of sociability and fellowship that should prevail.

On Wednesday evening, at 9 o'clock, in the Assembly Room of the Elks' Club, the Fort Wayne Medical Society will tender the visitors a "Smoker." Good music, a few vaudeville stunts and a buffet luncheon are on the program. This will be an informal affair and is intended as a "get-together" entertainment, where old friendships may be renewed and new friendships formed.

On Wednesday evening at 8 o'clock the visiting ladies will have an informal "get acquainted" gathering at the home of Dr. and Mrs. Miles F. Porter, 207 West Wayne Street, presided over by the wives and daughters of the Fort Wayne Medical Society.

Automobile drives have been arranged for all those who desire to avail themselves of such entertainment during the interim of meetings.

The visiting ladies will be given an automobile ride over the city on Thursday fore-

REGISTRATION

It is requested that immediately on arrival at Fort Wayne members of the Association should proceed at once to the registration bureau of the Association on the first floor of the Elks' Club and register. Registration will be by membership card, and to avoid delays and confusion members are urged to have their cards ready for inspection by the registration committee. Registering members are requested



GOVERNMENT BUILDING AND COURT HOUSE

noon at 10 o'clock, starting from the Anthony Hotel and ending at the Fort Wayne Country Club, where luncheon will be served, followed by a program of music, dancing and interpretive reading.

The Palace Theater announces that Thursday evening will be known as "Doctors' Night." The usual Keith vaudeville program will be given.

to indicate the number of ladies in the party so that the committee on entertainment of the visiting ladies may know early the number to be provided for. Badges will be furnished the members for identification.

Letters and telegrams may be sent to the Elks' Club in charge of the Committee on Registration.

HOTELS

Visitors will find hotel accommodations to suit every taste and purse. Among the hotels are the following:

Anthony Hotel, European plan, table d'hôte meals if desired, capacity 250; rates, \$1.50 and upward.

Wayne Hotel, European plan, capacity 130; rates, \$1.50 and upward.

Randall Hotel, European plan, capacity 100; rate, \$1.50 and upward.

RAILROADS

It is unnecessary to publish time tables, since seventy-five passenger trains, in and out each day, with hourly service on more than a half dozen interurban lines, North, East, South and West, make it possible for members to come and go at their convenience.

Members of the Reception Committee will meet all of the principal trains on Wednesday afternoon and Thursday morning. Members of this committee may be identified by the official badge.



Baltes Hotel (stag), European plan, capacity 100; rate \$1 and upward; table d'hôte meals if desired.

Alt Heidelberg (stag), European plan, capacity 50; rate, \$1 and upward.

Besides these there are numerous smaller hotels and boarding houses affording good accommodations at reasonable rates. The Committee on Arrangements will provide rooms in private families for those who wish to avail themselves of such accommodations, if notified at least forty-eight hours in advance.

Members are urged to make reservations at the hotels and boarding places in advance, and thus avoid the delays and confusion incident to assignment after arrival.

OFFICIAL CALL TO THE HOUSE OF DELEGATES

The next annual session of the Indiana State Medical Association will be held at Fort Wayne on Wednesday, Thursday and Friday, Sept. 27, 28 and 29, 1916. On a basis of ratio established by the by-laws ("Each component county society shall be entitled to send to the House of Delegates each year one delegate for every fifty members, and one for each major fraction thereof, but each component society which has made its annual report and paid its assessment as provided in this Constitution and By-Laws, shall be entitled to one delegate"), there will be a possible 111 delegates, distributed by counties as follows: Marion County, 6; Allen, Vander-

burg, Vigo and Lake, each 2; the other eighty-two counties, each 1; the thirteen councilors and the President and Secretary of the Association. County medical society secretaries must see to it that credentials for the delegates are in the hands of Dr. Allen Pierson, Spencer, Ind., on or before the first called meeting. No delegate will be seated unless wearing the official badge. The House of Delegates will convene promptly at 7 p. m., Wednesday, September 27, in the Assembly Room, third floor of the Commercial Club, and again at 11:30 a. m. Friday, September 29, at the same place.

The order of business will be as follows:

1. Call to order by the President.
2. Roll call and seating of qualified delegates.
3. Reading minutes of previous meeting.
4. Reports of officers:
 - (a) Secretary-Treasurer.
5. Reports of Standing Committees:
 - (a) Arrangements.
 - (b) Scientific Work.
 - (c) Public Policy and Legislation.
 - (d) Credentials.
 - (e) Necrology.
 - (f) Medical Defense.
 - (g) Publication.
 - (h) Health, Public Instruction and Medical Publicity.
 - (i) Medical Economics.
 - (j) Conservation of Vision and Hearing.
 - (k) Scientific Exhibit.
6. Reading of Communications.
7. Reading of Memorials and Resolutions.
8. Unfinished Business.
9. New Business.

Election of officers will be the first order of business Friday morning at 11:30. In addition to the regular officers, the terms of the following expire Jan. 1, 1917, and their successors must be elected at this session: Committee on Medical Defense, A. C. Kimberlin; delegates to the American Medical Association, C. H. Good, Miles F. Porter; alternates, C. A. White, A. M. Hayden. Delegates from counties comprising the Third, Sixth, Ninth and Twelfth districts are reminded that their councilors' (Drs. Heitger, Gronendyke, Tucker and Morgan, respectively) terms will expire. They were elected to serve only until Dec. 31, 1916. As this is the last annual session before the new term begins, it is required that these, the before-mentioned districts, elect councilors for the next three years and present their names at this

meeting of the House of Delegates for ratification.

Reference to the list of councilors as printed on the inside front cover of *THE JOURNAL* shows that at present one councilor is holding office after his term has expired, and it is not desirable that this happen again. In connection with this, the Secretary wishes to remind the councilors that in accordance with the amendment to Section 2, Article 9, of the Constitution which was carried last year, he has gone over the records and minutes since 1903, when the Council was first organized, and the result of this investigation is indicated after the name of each councilor, and shows when his term of office expires, the list being printed correctly in this number of *THE JOURNAL*. On January 1 of each year from now on, the Secretary will notify the district society secretaries to hold the required elections so that no further irregularity may ensue.

Mr. G. V. Sheridan, representing the Ohio State Medical Association, has been invited by President Keiper to address the House of Delegates at the Wednesday evening meeting and discuss the question of the Association's duty in taking a more active interest in legislation of importance to the medical profession.

THE COUNCIL

First meeting Wednesday, September 27, at 5 p. m., second floor Commercial Club; next meeting at 1:30 p. m., Friday, same place. Additional meetings at the call of the chairman of the Council.

CHARLES N. COMBS, Secretary.

ANNOUNCEMENT OF COMMITTEE ON CREDENTIALS

House of Delegates, Indiana State Medical Association:

Gentlemen:—It has been enacted into a law of the Association that the credentials of the delegates be in the hands of the Committee on Credentials before the first day of the annual session; this for the purpose of preventing confusion and for saving the time that should be wholly occupied otherwise in the business of the House of Delegates.

It is hoped that the secretaries of the county societies will see to it that this law is observed; that in the interval between the publication of this report and the first day of the Fort Wayne session those who have not already done so will forward the names of their delegates.

ALLEN PIERSON, Spencer, Ind.,
Chairman of Committee on Credentials.

ANNOUNCEMENT OF COMMITTEE ON SCIENTIFIC WORK

It is considered desirable to admonish essayists and discussants to be brief and to keep within their subjects; furthermore, to be prompt to the end that the somewhat lengthy program may be completed duly. The committee also wishes herewith to call attention to the importance of communication between essayists and their discussants previous to the session. If possible, copies of papers should be submitted to the appointed discussants. The presentation of illustrative cases will add much to the value of the essays.

Very respectfully,

JOHN A. MACDONALD, Chairman.

DAVID ROSS.

E. M. SHANKLIN.

CHARLES N. COMBS, ex-officio.

ANNOUNCEMENTS

The members and those accompanying them are requested to register on their arrival. The Bureau of Information and Registration is on the main floor of the Elks' Club, one-half block west of the Anthony Hotel on West Berry Street. Present your membership cards when registering. Members without their cards may register after their standing has been verified by consulting the records.

Members are reminded that they are required to designate under which section they wish to enroll, namely: Surgical, Medical, or Eye, Ear, Nose and Throat; but indicate one section only. You are requested to wear the official badge, which is supplied when you register, when attending or participating in the section meetings.

Essayists should bear in mind that their papers as presented at the Fort Wayne session represent copy for THE JOURNAL, and accordingly the title and full name and address of the essayist should appear at the top of the manuscript, and the body of the manuscript should be carefully edited. Attention to paragraphing, punctuation, capitalization, and grammatical construction of sentences will go a long way toward helping the editor and the printers. All manuscripts should be typewritten.

The ladies are urged to attend the informal reception at the home of Dr. and Mrs. Miles F. Porter on Wednesday evening, September 27, at 8 o'clock. This informal gathering will be presided over by the wives and daughters of the members of the Fort Wayne Medical Society. The ladies' program for Thursday is quite full, as will be seen by reference to the announcements concerning entertainment.

All entertainment for the ladies has been arranged by the wives of the members of the Fort Wayne Medical Society, and they have selected the following committees: Executive Committee, Mrs. A. E. Fauve, chairman; Mrs. B. W. Rhamy and Mrs. W. D. Calvin.

Advisory Committee, Mrs. M. F. Porter, chairman; Mrs. A. E. Bulson, Jr., and Mrs. L. P. Drayer. Social Committee, all the wives, sisters, and sweethearts of the members of the Fort Wayne Medical Society. The reception line includes the members of the Executive Committee, the Advisory Committee and Mrs. H. V. Sweringen.

The election of officers will be the first order of business at the meeting of the House of Delegates held in the Assembly Room, third floor of the Commercial Club, Friday, at 11 a. m. No member of the House of Delegates is eligible to office, and delegates to the A. M. A. must have been members in good standing of the A. M. A. for the past two years.

All of the members of the Association should hear the public addresses at the Majestic Theater on Thursday evening at 8 p. m. Dr. Christian will talk on The Contribution of Animal Experimentation to Internal Medicine; and Dr. Bloodgood will talk on The Cancer Problem. Aside from these addresses there will be a special musical program.

CONDENSED PROGRAM

Wednesday, September 27

AFTERNOON

Meeting of the Council at 5 p. m. on second floor of Commercial Club.

EVENING

Meeting of the House of Delegates, Assembly Room, third floor Commercial Club, 7 p. m.

Informal reception for ladies at the home of Dr. and Mrs. M. F. Porter, 207 West Wayne Street.

Informal Smoker, Assembly Room, first floor, Elks' Club, 9 p. m.

Thursday, September 28

FORENOON

General Meeting, Assembly Room, first floor, Elks' Club, 8:30 a. m.

Meeting of Section on Eye, Ear, Nose and Throat, Dining Room, second floor, Elks' Club, 10:30 a. m.

Meeting of Section on Medicine, Assembly Room, first floor, Elks' Club, 11 a. m.

Meeting of Section on Surgery, Lodge Room, third floor, Elks' Club, 11 a. m.

Automobile ride for the ladies, starting at the Anthony Hotel at 10 a. m.

AFTERNOON

Luncheon for the ladies at 12:30 p. m., followed by a musicale, at the Fort Wayne Country Club.

Scientific Demonstrations from 2 to 5 p. m., Assembly Room, third floor, Commercial Club.

Meeting of Section on Eye, Ear, Nose and Throat, Dining Room, second floor, Elks' Club, 2 p. m.

In honor of the visiting guest, Dr. William Campbell Posey of Philadelphia, the members of the Eye, Ear, Nose and Throat Section are invited to be the guests of Dr. Albert E. Bulson, Jr., at a luncheon to be given at 12:30 p. m., at the Anthony Hotel.

EVENING

General Public Meeting, Majestic Theater, 8 p. m.
Addresses by Henry A. Christian of Boston, and
Joseph C. Bloodgood of Baltimore.

Friday, September 29

FORENOON

All section meetings 9 a. m. Section on Medicine, Assembly Room, first floor, Elks' Club; Section on Surgery, Lodge Room, third floor, Elks' Club; Section on Eye, Ear, Nose and Throat, Dining Room, second floor, Elks' Club.

Meeting of House of Delegates, Assembly Room, third floor, Commercial Club, 11 a. m.

AFTERNOON

Meeting of Council at 1:30 p. m., second floor, Commercial Club.

General Meeting, Assembly Room, first floor, Elks' Club, 2 p. m.

OFFICIAL PROGRAM OF THE ANNUAL SESSION OF THE INDIANA STATE MEDICAL ASSOCIATION

TO BE HELD AT FORT WAYNE,
SEPT. 27, 28, 29, 1916

HOUSE OF DELEGATES

First meeting, Assembly Room, third floor, Commercial Club, Wednesday evening, September 27, at 7 p. m.

Second meeting, Assembly Room, third floor, Commercial Club, Friday morning, September 29, at 11 a. m.

COUNCIL

First meeting, Wednesday, September 27, second floor, Commercial Club, at 5 p. m.

Final Meeting, second floor, Commercial Club, Friday, September 29, at 1:30 p. m. Additional meetings are at the call of the President of the Council.

GENERAL MEETINGS

(ASSEMBLY ROOM, FIRST FLOOR, ELKS' CLUB)

Thursday, September 28, 8:30 to 11 a. m.

Friday, September 29, 2 p. m.

PUBLIC MEETING

Thursday, September 28, 8 p. m., Majestic Theater.

SECTION ON MEDICINE

(ASSEMBLY ROOM, FIRST FLOOR, ELKS' CLUB)

Thursday, September 28, 11 a. m.

Friday, September 29, 9 a. m.

SECTION ON SURGERY

(LODGE ROOM, THIRD FLOOR, ELKS' CLUB)

Thursday, September 28, 11 a. m.

Friday, September 29, 9 a. m.

SECTION ON EYE, EAR, NOSE AND
THROAT

(DINING ROOM, SECOND FLOOR, ELKS' CLUB)

Thursday, September 28, 10:30 a. m.

Thursday, September 28, 2 p. m.

Friday, September 29, 9 a. m.

SCIENTIFIC DEMONSTRATIONS

(ASSEMBLY ROOM, THIRD FLOOR, COMMERCIAL CLUB)

Thursday, September 28, 2 p. m.

COMMERCIAL EXHIBITS

(SECOND FLOOR, ELKS' CLUB)

Throughout the entire session.

ENTERTAINMENTS

Wednesday, September 27, at 9 p. m., Smoker in the Assembly Room, first floor, Elks' Club.

Wednesday, September 27, at 8 p. m., the ladies will have an informal "get acquainted" gathering at the home of Dr. and Mrs. M. F. Porter, 207 West Wayne Street, presided over by the wives and daughters of the members of the Fort Wayne Medical Society.

Thursday, September 28, at 10 a. m., automobile drive for ladies, starting from Anthony Hotel.

Thursday, September 28, 12:30 p. m., luncheon for the ladies at the Fort Wayne Country Club, followed by a musicale.

Thursday, September 28, at 12:30 p. m., Luncheon at the Anthony Hotel for the members of the Eye, Ear, Nose and Throat Section, given by Dr. Albert E. Bulson, Jr., in honor of the visiting guest of the Section, Dr. William Campbell Posey of Philadelphia.

SCIENTIFIC PROGRAM

GENERAL MEETINGS

(ASSEMBLY ROOM, FIRST FLOOR, ELKS' CLUB)

Thursday, 8:30 to 11 a. m.

Organization.

Address of Welcome.

Address of President, Dr. George F. Keiper, LaFayette.

PAPERS

1. DR. MURRAY N. HADLEY, Indianapolis.

Subject: The Influence of Modern Immunity Research on Surgery.

Abstract.—In a biologic sense immunity is to be viewed as a defensive mechanism against natural enemies of the species. The various defensive mechanisms evolved by the lower order of animals in the long struggle for existence has the same biologic significance as the condition called immunity in the human race.

Pathogenic organisms are natural enemies of the human species, and the immunity developed against the attack of these enemies is the defensive mechanism by which the species is enabled to survive.

The recognition of the principles of immunity by Jenner and Pasteur was a brilliant discovery, but the more difficult task of identifying the various factors of immunity so that they can be controlled and used in therapy, in the main is yet unsolved.

A rational therapy directed toward strengthening the body defenses against pathogenic micro-organisms must be based on a clear understanding of what those defenses are.

Our present conception of these defenses places them in two classes: the cellular and humoral.

The cellular defenses consist of the phagocytic cells of the body fluids and certain fixed cells. The

humoral defenses are the antibodies, such as the opsonins, agglutinins, etc., of the blood serum. As far as surgical infections are concerned the defensive mechanism seems to be built about the phagocytic cells.

In surgical infections antiseptics are of positive harm, because they are as a rule antileukocytic. Normal and hypertonic salt solution ideal from standpoint of cooperation with local factors of immunity.

Biers' hyperemia correct in theory and successful in practice. Vaccines permissible in localized and chronic infections, serums in the more severe types.

Prophylactic use of vaccines against surgical infections ideal in theory and hope is entertained that they may become successful in practice.

2. DR. CHARLES B. DANRUTHER, Laporte.

Subject: The Influence of Modern Research on Medicine.

Abstract.—The greatest influence of modern immunity research is that it has within the past half century placed the theory and practice of medicine on a scientific basis. It has given us a definitely known cause for practically every known infectious disease. After the discovery of the causative agent came the study of its morphology, its mode of attack, its effect on its host, and the reaction of the host to its presence. The knowledge gained as a result of these studies has made possible the development of that branch of medicine which is having and will continue to have the greatest influence on civilization of any factor of any age, namely, that of preventative medicine. We must not forget, on the other hand, the possibility of an almost unlimited field of curative medicine, which has been opened up by these investigations.

Considering the brief period of time since the birth of this branch of medical research, the knowledge and advances made along these lines, the investigations now being pursued, we can only be hopeful as to its future; for we are only beginning, and the definitely proven facts now at our command are only stepping stones to their more general and more successful application in infectious diseases. Even if contributions to these sciences should cease, the world will owe an immense debt of gratitude to the investigators of the present and recent past, which never can be paid.

Leaders in discussion: Dr. V. H. Moon, Indianapolis; Dr. A. O. Trulove, Warsaw.

Thursday, 2 to 5 p. m.

Scientific Exhibit and Demonstrations for all members of the Association in the Assembly Room, third floor, Commercial Club.

1. State Board of Health Exhibit.

Epidemiology of Rabies—15 Charts.

Epidemiology of Typhoid—15 Charts.

Negri Bodies Stained by the New Kinyoun Stain.

Diphtheria Bacilli Stained by the New Kinyoun Stain.

2. X-Ray Exhibit.

DRS. B. P. WEAVER and C. C. GRANDY of Fort Wayne.

3. Pathological Museum.

DRS. M. F. PORTER, M. I. ROSENTHAL and H. A. DUEMLING.

4. Pathological Chemistry.

Colorimetric Instruments and Methods, by DR. B. W. RHAMY of Fort Wayne.

5. Demonstration of Electrocardiograph.

DRS. G. W. McCASKEY and M. F. PORTER of Fort Wayne.

6. Lantern Slide Exhibit of Indiana School for Feeble-Minded Youth.

DR. G. S. BLISS, Fort Wayne.

7. Exhibition of a Case of Progressive Lateral Sclerosis, with Case History.

DR. C. D. HUMES, Indianapolis.

8. Questionnaire Exhibit of the Indiana State Medical Association.

Thursday, 8 p. m.

(MAJESTIC THEATER)

1. Address, DR. HENRY A. CHRISTIAN, Boston.

Subject: The Contribution of Animal Experimentation to Internal Medicine.

2. Address, DR. JOSEPH C. BLOODGOOD, Baltimore.

Subject: The Cancer Problem.

Friday, 2 p. m.

(ASSEMBLY ROOM, FIRST FLOOR, ELKS' CLUB)

1. Address, MR. HOWE S. LANDERS, Indianapolis, Secretary of the State Industrial Board.

Subject: The Workmen's Compensation Law in Its Relation to the Practice of Medicine.

Abstract.—In this paper I shall attempt only to explain to you what the Indiana Workmen's Compensation Act is.

The title of the act clearly sets forth the purpose of the legislature, and the end to be gained. It is briefly as follows:

An act to promote the prevention of industrial accidents; to cause provision to be made for adequate medical and surgical care for injured employees; to establish rates of compensation for personal injury or death sustained by employees in the course of employment; to provide methods of insuring the payments of such compensation; to create an industrial board for the administration of the act, and to prescribe the powers and duties of such board, etc.

It is seen by a reading of the title that this law is of particular interest to the medical profession, and I shall confine this paper to a general interpretation of the law with special reference to its medical aid provisions.

Leaders in discussion: Dr. J. H. Oliver, Indianapolis; Dr. W. B. Kitchen, Indianapolis.

SECTION ON MEDICINE

(ASSEMBLY ROOM, FIRST FLOOR, ELKS' CLUB)

Thursday, 11 a. m.

1. DRS. F. B. WYNN and R. C. BEELER, Indianapolis.

Subject: The Necessity of Coordinating Methods in the Definitive Diagnosis of Pulmonary Tubercular Lesions:

a. Family and Previous Personal History.

b. Clinical Study and Physical Examination.

c. Roentgen Findings.

d. Laboratory Factors.

Illustrated by lantern slides.

Abstract.—However valuable the modern methods of laboratory diagnosis of tuberculosis, they often lead practitioners to "short cuts" in diagnosis. The result is an inadequate clinical study of the case,

and therefore a lack of that fundamental knowledge which will insure wise action in management. It is not enough merely to diagnose tuberculosis of the lungs, but the location and extent of lesions, if possible, must be defined; a clinical summary must be forthcoming not only as to the tuberculous focus, but as to its bearing on the general state of the patient. With this larger knowledge in diagnostic procedure, prognosis becomes easier, and successful management more likely.

Leaders in discussion: Dr. W. A. Fankboner, Marion; Dr. Charles N. Combs, Terre Haute.

2. DR. GEORGE W. McCASKEY, Fort Wayne.

Subject: The Incidence; Diagnosis and Treatment of Visceral Syphilis.

Abstract.—About 20 per cent. of the total population is syphilitic. Of this a very large but undetermined percent develops visceral syphilis. Routine Wassermanns made by the author in practically all cases presented for diagnosis during the last year show an astonishing proportion of cases of visceral syphilis. Of these the central nervous system presents by far the largest number. The circulatory apparatus comes second but not very far behind, while the digestive system, especially the stomach, liver and spleen and the kidneys, present a smaller number. The clinical picture of most cases of visceral syphilis, aside from tabes and paresis, is not very characteristic. Wassermann tests play the roll of first importance. Negative Wassermann does not exclude syphilis. Positive Wassermann does not always prove syphilitic nature of principal ailment. This is a question of clinical judgment in which all data—amnesia symptoms, laboratory findings, etc.—must be taken into account.

The specific treatment—a judicious combination of salvarsan and mercurial preparations—each of which is essential, not forgetting the rational treatment—hygienic dietetics, etc.—irrespective of the specific factor. Special methods—lumbar puncture, intraspinal medication, etc.—are essential and for the most part desirable if not essential, in the treatment of cerebral spinal syphilis.

Leaders in discussion: Dr. A. W. Brayton, Indianapolis; Dr. Charles P. Emerson, Indianapolis.

Friday, 9 a. m.

1. DR. LOUIS F. ROSS, Richmond.

Subject: Syphilitic Cardiovascular Disease.

Abstract.—Importance of the condition due to its frequency and seriousness. The pathologic process is a permanent sclerosis due to thrombosis of the vasa vasorum and the terminal branches of the coronary arteries.

Localization of the spirochaeta may be due to (a) elective affinity of different strains for different tissues or (b) growth may be favored by low oxygen supply. Relation of the pathology to the symptoms. Importance of prevention in view of the impossibility of cure. Education the most important factor in prophylaxis.

What may be expected from specific treatment. 1. Arrest of the process. 2. Some improvement of the symptoms from betterment of the general condition. Specific treatment includes the persistent but careful administration of salvarsan, mercury and potassium iodid. Importance of nonspecific treatment. Rest. Diet. Digitalis. Bleeding.

Leaders in discussion: Dr. George S. Bond, Indianapolis; Dr. D. A. Bartley, Spencer.

2. DR. ALFRED HENRY, Indianapolis.

Subject: Tuberculosis—Plus.

Abstract.—Tuberculosis is seldom a pure infection, but if so, it does not do much harm before it can be retarded or arrested. Pus producing organisms come along and start real trouble. Plus is the mixed infection and can often be avoided. Many minor operations in tubercular conditions are detrimental in that an avenue is opened for mixed infection to develop. An ether anesthetic often adds a plus to tuberculosis. Stomach and intestinal indigestion almost invariably accompanies tuberculosis and needs scientific attention. More plus is manifested by general systemic impairment. Home sickness is another form of plus too often forced on patients. Tuberculosis is bad enough. Tuberculosis-Plus is too bad. The profession should quit producing Plus and give it more attention when it is produced.

Leaders in discussion: Dr. S. B. Simms, Frankfort; Dr. Weir Miley, Anderson.

3. DR. T. C. KENNEDY, Indianapolis.

Subject: Radium Therapy.

Abstract.—The uninformed are very skeptical concerning the value of radium in therapeutics, but radium is rapidly taking the place in medicine which rightfully belongs to it.

Until comparatively recently radium therapy has been devoted to the treatment of malignant conditions, and extravagant claims have been made for it. It is of great value in epithelioma of the face and eye lids where the cosmetic results mean much to the patient. Carcinoma of the uterus and rectum are oftentimes greatly relieved, if not cured; pain, hemorrhage, and discharge being checked and the patient rendered more comfortable.

It is in nonmalignant conditions that radium is proving to be of inestimable worth. This is a new field and is being rapidly developed. In the current medical literature we find many reports of the curative value of radium in fibroid tumors, goiter, endometritis, urethral caruncle and many other pathological conditions. In the treatment of tic-doloureux, intercostal neuralgia, etc., the results have been little less than marvelous.

It will take much time and investigation to determine the dosage, the number of applications, the proper amount of screening, just as it has in the development of Roentgen therapy.

Leaders in discussion: Dr. Maurice I. Rosenthal, Fort Wayne; Dr. Edwin Walker, Evansville.

4. DR. H. H. MILLER, South Bend.

Subject: The Diagnosis in Certain Gastric Disorders.

Abstract.—Early diagnosis of diseases which first manifest themselves by disturbances of digestion not made often enough. Early diagnosis often most difficult. Early diagnosis of greatest importance since success of treatment depends on it. Tendency to look for typical or textbook pictures which in fact only appear in well developed cases. Need of making use of all the approved modern methods of diagnosis in all cases. Careful history with proper attention to time relation of symptoms. Painsstaking physical examination. Laboratory tests of stomach contents and stools. Roentgen ray. Exploration. Failure to fully appreciate the fact that symptoms of intra-abdominal disturbance mean something. Too great a tendency to lull ourselves to sleep with a meningless, baseless diagnosis. Gastric and duodenal ulcer. Gastric cancer. Cholecystitis. Chronic gastritis. Nervous dyspepsia. Chronic appendicitis.

Leaders in discussion: Dr. A. B. Graham, Indianapolis; Dr. M. F. Porter, Jr., Fort Wayne.

SECTION ON SURGERY

(LODGE ROOM, THIRD FLOOR, ELKS' CLUB)

Thursday, 11 a. m.

1. DR. E. D. CLARK, Indianapolis.

Subject: Advanced Ectopic Pregnancy and Report of Cases.

Abstract.—Report of a case of extra-uterine pregnancy at term in a woman 28 years of age. This was her fourth pregnancy. Pregnancy apparently normal except unusual amount of abdominal pain and nausea. Foetal movements observed between the fourth and fifth month, and continued in a normal way until three weeks before her admittance to the hospital. At the end of the tenth month an attempt to bring on labor was made, which resulted in an infection of the uterus. The operation consisted in the removal of the fetus, placenta and the infected uterus and tubes.

Leaders in discussion: Dr. Charles M. Mix, Muncie; Dr. Miles F. Porter, Fort Wayne.

2. DR. J. W. SHAFER, LaFayette.

Subject: Cesarean Section.

Abstract.—Pelvic contractions the only scientific and absolute indication for the Cesarean operation.

True conjugate, 7 cm.—safe standard maximum for the operation. Tumors, placenta praevia and eclampsia not true indications for the Cesarean operation.

Necessity of early examination and diagnosis of all primipara. Methods of examination. Time to operate. Danger of frequent and careless examinations. The operation safe for the child but dangerous to the mother's future. Danger of uterine rupture. "Once a Cesarean, always a Cesarean," a safe and sane axiom.

Tendency toward less Cesarean and more conservatism in obstetrics. The application of the art of obstetrical manipulations needed more, surgery less. Mortality of mother and child. Operation—the preparation, technic and after-care.

Leaders in discussion: Dr. O. G. Pfaff, Indianapolis; Dr. George F. Holland, Bloomington.

3. DR. A. F. KNOEFEL, Terre Haute.

Subject: First Aid to the Injured as Taught by the Bureau of Mines.

Abstract.—First aid to the injured is divided into two classes: First, that which should only be entrusted to the physician, and second, those procedures which may safely be carried out by the layman. It is on the latter that this paper dwells.

The Bureau of Mines, how constituted and what it is doing in standardizing first aid and teaching it to the employees of the mining industry. Number of miners in the United States who have taken the prescribed course of training and the nature of this training.

It is the endeavor of the Bureau of Mines to simplify all dressings and methods of their application. No antiseptics or washing of wounds are advised. Wounds should be covered with sterile dressings. Fractures are splinted. Dislocations are dressed in the line of deformity. For active bleeding the men are taught where to apply pressure and the application of the tourniquet. Picric acid gauze is recommended for use in burns. The use of roller bandages, cotton and loose gauze is prohibited. Triangular or Esmarch bandage is used. The bandage compress is

used to cover wounds. Various methods of transporting the injured are also taught. Method of treating persons injured by contact with electric current. Methods of resuscitation after exposure to poisonous gases are gone into with much detail. Where manual method of artificial respiration is performed the Schaefer method is the one of choice. Description of the various types of artificial breathing apparatus.

Leaders in discussion: Dr. S. J. Young, Valparaiso; Dr. George R. Andrews, Muncie.

Friday, 9 a. m.

1. DR. GEORGE F. BEASLEY, LaFayette.

Subject: The Evolution of the Splint.

Abstract.—The treatment of fractures of the femur has always been a problem to the profession. The authorities and teacher seem content to travel in the same old ruts, to the discomfort of their trusting patients. The only proper way is by suspension and the paper covers the evolution of a simple splint that can be easily made and when properly applied is comfortable and does the work.

Leaders in discussion: Dr. Charles Stoltz, South Bend; Dr. E. B. Mumford, Indianapolis.

2. DR. T. B. EASTMAN, Indianapolis.

Subject: Hyperthyroidism and Its Relation to Certain Pelvic Disorders in Women.

Abstract.—The subject of the ductless glands represents a broad and important field, the surface of which has been hardly scratched as yet.

The old statement "a woman is a woman on account of her ovaries," must be modified to read, "a woman is a woman on account of her ovaries, plus certain ductless glands, plus the harmonious inter-relationship of these glands." To determine in certain cases where the true etiology lies is always of utmost importance and frequently most difficult. On this factor depends our success or failure in the treatment of certain disorders of the pelvic viscera of the female.

Leaders in discussion: Dr. H. O. Pantzer, Indianapolis; Dr. Edwin Walker, Evansville.

3. DR. M. I. ROSENTHAL, Fort Wayne.

Subject: A New Operation for Empyema of the Chest.

Abstract.—Exhibition of instruments and description of a new operation for empyema of the chest.

Leaders in discussion: Dr. W. D. Gatch, Indianapolis; Dr. William H. Williams, Lebanon.

4. DR. JOHN C. FLEMING, Elkhart.

Subject: Factors Which Contribute to Safety and Success in Surgical Procedures.

Abstract.—1. A correct diagnosis secured by (a) a period of preliminary careful observation before operation; (b) "team work." 2. Choice of anesthetic. Ether is not always the safest anesthetic. Indications for other agents. 3. A consideration of the present high mortality in intestinal obstruction and perforations of the stomach and bowels. 4. A consideration of the management of neurotics in reference to surgery. 5. Importance of reexamination and subsequent observation following operative procedure.

Leaders in discussion: Dr. A. C. McDonald, Warsaw; Dr. H. H. Martin, Laporte.

EYE, EAR, NOSE AND THROAT SECTION

(DINING ROOM, SECOND FLOOR, ELKS' CLUB)

Thursday, 10:30 a. m.

1. Chairman's Address. DR. ALBERT E. BULSON, JR., Fort Wayne.

Subject: Penetrating Wounds of the Eyeball.

Abstract.—Penetrating injuries of the eyeball divided into two classes.

1. Those accompanied by retention of a foreign body within the eyeball. Steel, lead, copper, glass, coal, stone, etc. Site of injury, possibility of removal, and question of infection influencing prognosis. Damage to intra-ocular contents. Preservation of eyeball without vision often a factor worth considering. Possibilities of sympathetic inflammation.

2. Those unaccompanied by retention of foreign body. May be from any sharp or blunt object that strikes the eyeball with sufficient force to penetrate the tunics. Injuries through cornea, ciliary region, and sclera. Damage to intra-ocular contents. Loss of part of contents of eyeball. Closure of wound, iodine treatment, conjunctival flaps. Suturing cornea, suturing sclera. Infection. Enucleation and substitutes.

Leaders in discussion: Dr. George F. Keiper, LaFayette; Dr. H. E. Glock, Fort Wayne.

2. DR. GEORGE W. SPOHN, Elkhart.

Subject: A Working Knowledge, for the Generalist, in Ophthalmology and Oto-Laryngology.

Abstract.—1. Does a degree from a medical college presuppose too much? 2. Is there a "line of demarcation" between the generalist and the specialist? 3. As taught by our best medical colleges, what are the highest aims in the practice of medicine and surgery? 4. In comparison to other branches of medicine, does the generalist devote much time to the study of ophthalmology and oto-laryngology? 5. The generalist should know (a) that many eye and ear diseases might have been avoided; (b) that most of the work in ophthalmology and oto-laryngology is definite and positive; (c) that many of the pathological conditions of the general system are caused by defects in the eyes, ears nose or throat; (d) the mechanism of hearing and seeing; (e) that practically all blindness and deafness might have been avoided.

Leaders in discussion: Dr. E. M. Shanklin, Hammond; Dr. F. C. Heath, Indianapolis.

3. DR. W. F. HUGHES, Indianapolis.

Subject: Cataract.

Abstract.—Causes and classification of cataract. Prognosis of different forms. Non-operative treatment, including rest of eyes and local and general medicinal measures. Operative treatment, including couching, dissection, extraction, and intra-capsular extraction. Accidents and complications. Results.

Leaders in discussion: Dr. L. D. Brose, Evansville; Dr. S. A. Shoemaker, Bluffton.

Thursday, 2 p. m.

1. Address: DR. WILLIAM CAMPBELL POSEY, Philadelphia.

Subject: Diseases of the Lacrimal Apparatus.

Abstract.—Certain anatomic peculiarities in the formation of the skull which favor lacrimal disease. Diseases of the secretory apparatus: of the excretory apparatus—congenital anomalies and congenital dacryocystitis—etiology and treatment of lacrimal obstruction—of dacryocystitis—syndromes, probing, styles.

Mucocle, prelacrimal tumors and abscesses. Extirpation of the lacrimal sac; indications for and description of the technic. Description of newer operations designed to drain the sac by establishing a direct communication between the sac and the nasal cavity.

Leaders in discussion: Dr. Frank A. Morrison, Indianapolis; Dr. Thomas C. Hood, Indianapolis.

2. Symposium: The Mastoid.

a. DR. WILLIAM F. CLEVINGER, Indianapolis.

Subject: Infections of the Mastoid. Skiagraphy and Other Aids to Early Diagnosis.

Abstract.—Purulent or necrotic mastoiditis ordinarily understood to be characterized in every instance by discharge of pus from ear canal and by tenderness over the mastoid process. This impression is erroneous. Very many virulent infections of mastoid shown to exist without discharge and without tenderness on pressure; due in former instance to small or abnormally placed antrum and in latter to heavy cortex.

The temporal bone at birth and very early life has many points of vital importance from diagnostic and operative standpoint. At birth about one fourth that of full development and many of the well defined parts present in adult life absent. Other anatomical considerations relating to early life and also to adolescent period.

The two mastoids in same subject vary in a certain proportion of instances. This fact significant as relating to unilateral infections and bears definite relationship to skiagraphic interpretation.

Bacterial infection varies greatly and is most significant. Practically all of group of bacilli may be found in a series of infections including diphtheria and pyocyanus bacillus.

As confirmatory evidence of existence of mastoid infection the value of radiography cannot be overestimated. Skiagraphy indicated in every instance of otorrhea and bacteriologic tests should be frequently made throughout the course of an otorrhea. The capsulated cocci significant and non-capsulated of far less importance. Infections of latter type usually end without surgery and without serious impairment of hearing.

Diagnostic means in "indefinite" affections outlined. Indications and contra-indications for surgery.

b. DR. HARRY K. LANGDON, Indianapolis.

Subject: Bacteriology of Mastoiditis.

Abstract.—Infection defined and the cardinal symptoms which influence it. In spite of the fact that the respiratory mucous membranes are the habitat of great numbers of bacteria, infection does not always occur, because of insufficient virulence of organisms or by reason of adequate cell defense.

Explanation of physical preparedness: Production of specific antibodies, the defense of the phagocytes and the natural anatomical defenses. Observations on the nature of bacteria present in oral and nasal cavities.

Because of intimate relationship of these cavities and the tympanic cavity, mastoid cells and antrum, it is easy to understand how middle ear infection may occur. Routes of infection. Organisms most frequently encountered in mastoid infection. Discussion of organisms found in a series of cases. Discussion of vaccines in mastoid inflammation. General conclusions.

c. DR. ALBERT M. COLE, Indianapolis.

Subject: Roentgen Diagnosis of Mastoiditis.

Abstract.—The Roentgen diagnosis in mastoid disease is becoming more popular with the otologist because it has a certain value in a large percentage of

cases. Probably not every case demands the use of the Roentgen ray, but in very many cases it is of particular value in not only showing the presence of the mastoid disease but also showing the type of disease, and it is particularly useful where there are symptoms about the head which might mean abscess or meningitis from an extension of the mastoid disease.

The technic of making these plates is very important. The interpretation of the plates themselves is still more important and difficult. In the chronic type of disease the interpretation is not so difficult. In the acute types the plates must be studied carefully and there must be cooperation of the roentgenologist and otologist to consider the facts in hand, correlate the clinical and Roentgen-ray findings and check up by operation. In the acute type a careful study of the plates may decide whether an operation is essential or not. The plates may be also of value in outlining lateral sinuses or locating the floor of the middle fossa.

Leaders in discussion: Dr. K. K. Wheelock, Fort Wayne; Dr. E. J. Lent, South Bend.

Friday, 9 a. m.

1. DR. C. NORMAN HOWARD, Warsaw.

Subject: A Review of Prescription Work.

Abstract.—Necessity for a routine examination leading up to the prescription for glasses. Detailed account of one such routine. Care should be taken to recognize other conditions as possible cause of patient's discomfort or lack of vision. The increasing use of torics and large lenses and irregular shapes. Prisms rarely prescribed. The percentage of occurrence of the different varieties of ametropia.

Leaders in discussion: Dr. J. R. Newcomb, Indianapolis; Dr. M. T. Jay, Portland.

2. DR. LAFAYETTE PAGE, Indianapolis.

Subject: Cancer of the Larynx.

Abstract.—Review of paper with report of two cases of cancer of the larynx presented to this society at the West Baden meeting in 1905.

Since then the author has operated on nine other cases of cancer of the larynx, including five thyrotomies or laryngo fissures, two hemi-laryngectomies and two complete laryngectomies.

During the past sixteen years the author has had under observation and treatment seventeen cases of cancer of the larynx in all. On eleven of these radical operations were performed.

With the knowledge and experience gained from the handling of these cases there is no further doubt in the author's mind but that at least 80 per cent. of the cases of intrinsic cancer of the larynx can be cured with the comparatively simple operation (thyrotomy), if it could be performed at the opportune time. Responsibility of the laryngologist in making an early diagnosis. Points of great value in making an early diagnosis; tuberculosis and syphilis the most common affections with which we are likely to be confused. The author's observations on the indications for thyrotomy, for hemi-laryngectomy and for complete laryngectomy, with the value of the Roentgen rays and radium in the after treatment. Presentation of photographs and specimens; with report of cases.

Leaders in discussion: Dr. E. de Wolfe Wales, Indianapolis; M. S. Smith, Laporte.

3. DR. JOSEPH MAURER, Marion.

Subject: Errors in Diagnosis of Non-Suppurative Diseases of the Accessory Sinuses.

Abstract.—Errors in diagnosis of sinus disease frequent. The Roentgen ray and transilluminator often

misleading. Advisability of exploratory operations in some cases. Inspection often leads one to think a nose is normal, when one or more of the sinuses may be infected. Many cases of so-called postnasal catarrh are due to sphenoidal sinus infection. Report of cases.

Leaders in discussion: Dr. M. Ravdin, Evansville; Dr. W. A. Hollis, Hartford City.

4. DR. JOSEPH D. HEITGER, Bedford.

Subject: The Diagnosis of Maxillary Sinusitis.

Abstract.—The maxillary sinus is the largest and probably the most often affected of the accessory sinuses. Consideration of the anatomy of the lateral nasal wall in its particular relation to the maxillary sinus, including the topography of the hiatus semilunaris and the ostium maxillare. The floor and anomalies of the walls of the antrum.

The anatomical position of the antrum produces a double source of infection, nasal and dental. Detailed survey of these two sources in their etiological and pathological significance.

Obscurity and variety of subjective and objective symptoms emphasize the importance of routine methods of diagnosis. Differential diagnosis.

The most important aids in routine diagnosis. General conclusions drawn from the above.

Leaders in discussion: Dr. J. F. Barnhill, Indianapolis; Dr. W. S. Tomlin, Indianapolis.

REPORT OF SECRETARY-TREASURER

House of Delegates, Indiana State Medical Association.

Gentlemen: Herewith find submitted the preliminary report for the year 1916 covering the first nine months of the year. The report as it concerns the paid up membership is slightly disappointing, as there is a decrease of twenty-three members in comparison with the report one year ago, the total Sept. 1, 1916, being 2,554. This is, of course, less than 1 per cent., a small margin which easily could be covered by a very few societies. It is only fair to state that a larger number of counties than usual have already increased their membership, but in order to achieve a gain for the entire year, this report will not publish the honor roll this year, but instead a list of the counties that have *not* reinstated 90 per cent. of their last year's membership: Vigo, Lake, Jefferson, Kosciusko, Posey, Clark, Dubois, Harrison, Jay, Jennings, Owen, Pike, Washington, White, Benton, Crawford, Fulton and Johnson.

The following recapitulation of the financial affairs of the Association for this year will be supplemented in the January JOURNAL by the complete report for the fiscal year:

Balance on hand January 1.....	\$3,039.34
2,554 members for 1916.....	5,108.00
	<hr/> \$8,147.34
EXPENDITURES FOR 1916	
Journal subscriptions	\$1,915.50
Medical defense fund.....	1,915.50
Printing bills	183.66
Councilor expenses	25.58
Detroit exhibit	64.00
	<hr/> \$4,104.24

Balance on hand Sept. 5, 1916..... \$4,043.10

The balance is in excess of the balance the first of the year by \$1,000, which amount will be sufficient

COUNCILORS' REPORTS

FIRST DISTRICT							EIGHTH DISTRICT						
Counties	No. in County Society	Eligible Members	No. of Society Meetings	Attendance	No. of Scientific Papers	No. of Case Reports	Counties	No. in County Society	Eligible Non-Members	No. of Society Meetings	Attendance	No. of Scientific Papers	No. of Case Reports
Pike.....	18	22	6	6	6	16	Blackford.....	16	5	6	7	4	0
Gibson.....	26	11	9	18	24	5	Delaware.....	58	7	12	26	13	10
Posey.....	19	4	3	12	1	1	Jay.....	21	3	10	7	8	8
Vanderburg.....	79	..	24	25	54	50	Madison.....	62	4	10	30	33	20
Warriek (no report).....	..	..	..	..	..	..	Randolph.....	32	6	24	14	18	20
Spencer.....	20	11	11	9	9	..	Totals.....	127	21	52	54	43	38
Perry.....	10	6	5	5	0	8							
Totals.....	172	54	58	75	94	80							
SECOND DISTRICT							NINTH DISTRICT						
Sullivan.....	33	3	9	17	14	4	Howard.....	31	3	9	9	1	3
Knox.....	47	7	12	15	24	6	Tipton.....	16	6	0	..	..	..
Davies.....	26	5	10	12	6	18	Hamilton.....	21	18	12	10	10	6
Martin.....	10	..	2	7	0	8	Clinton.....	19	20	10	12	14	..
Monroe.....	20	6	6	12	6	6	Boone.....	20	..	8	6	8	20
Owen.....	16	6	4	7	3	..	Tippecanoe.....	58	2	20	12	8	60
Greene.....	21	1	4	25	8	20	Montgomery.....	36	60	10	9	8	3
Totals.....	172	22	47	95	61	62	Pt. Warren.....	34	0	9	10	19	3
							Totals.....	219	103	76	68	68	95
THIRD DISTRICT *							TENTH DISTRICT						
DuBois.....	19	5	12	10	10	20	Lake.....	84	15	12	28	17	19
Lawrence.....	24	5	9	9	2	12	Porter.....	22	3	13	7	10	6
							Jasper-Newton.....	19	6	12	14	24	8
FOURTH DISTRICT							Laporte.....	47	3	14	20	27	17
Decatur.....	17	2	15	6	5	..	Benton (no report).....	..	..	..	..	..	..
Bartholomew.....	22	14	10	12	10	15	Totals.....	172	27	51	69	78	50
Jackson.....	24	..	9	14	10	..							
Jennings.....	19	0	6	9	4	11							
Jefferson.....	23	4	10	7	6	6							
Ripley.....	18	14	10	7	18	..							
Dearborn-Ohio.....	24	4	10	10	..	..					
Switzerland.....	9	2	1	..	0	0							
Totals.....	156	40	71	65	53	32							
FIFTH DISTRICT							ELEVENTH DISTRICT						
Vigo.....	91	8	37	22	31	17	White (no report).....	..	..	..	..	..	..
Parke-Vermilion (no report).....	..	..	..	..	..	..	Carroll.....	28	..	..	..	..	..
Clay.....	20	16	8	10	20	4	Cass.....	43	4	38	14	84	61
Putnam (no report).....	..	..	..	..	..	..	Miami.....	27	15	11	11	15	6
Totals.....	111	24	45	32	51	21	Wabash.....	28	5	10	15	8	..
							Grant.....	54	0	12	24	11	..
SIXTH DISTRICT							Huntington.....	36	8	11	10	8	12
Hancock.....	19	5	8	9	7	20	Totals.....	216	32	82	74	126	79
Henry.....	34	20	11	21	16	15							
Fayette (no report).....	..	..	..	..	..	..	
Franklin (no report).....	..	..	..	..	..	..	
Rush.....	20	4	0	0	0	0							
Union (no report).....	..	..	..	..	..	..	
Shelby.....	15	20	0	..	0	..							
Wayne.....	52	..	10	15	15	5							
Totals.....	140	49	29	45	38	40							
SEVENTH DISTRICT							TWELFTH DISTRICT						
Hendricks.....	29	3	12	15	15	6	Lagrange.....	21	1	2	6	1	5
Johnson.....	19	9	7	7	6	5	Noble.....	30	2	6	20	30	3
Marion.....	313	..	35	83	38	60	Whitley.....	16	3	3	8	6	12
Morgan.....	16	24	12	8	7	5	Wells.....	27	1	7	8	7	22
Totals.....	377	36	66	113	66	76	Adams.....	19	..	12	8	11	25
							Allen.....	101	115	45	20	40	30
EIGHTEENTH DISTRICT							DeKalb (no report).....	..	..	..	..	..	..
St. Joseph.....	60	20	36	21	38	51	Steuben.....	18	10	10	8	10	20
Pulaski.....	5	8	2	5	2	12	Totals.....	213	132	73	70	94	92
Fulton.....	16	6	8	8	8	..							
Marshall.....	25	10	11	9	23	5							
Elkhart.....	57	10	10	28	28	2							
Kosciusko.....	25	34	5	8	6	..							
Starke (no report).....	..	..	..	..	..	..	
Totals.....	147	72	53	62	74	65							

* Report from only two counties.

to pay the expenses of the annual session and the remaining bills that will accumulate prior to December 31. Since the net income of the Association is only 50 cents a member, there is a very small surplus to cover miscellaneous appropriations made by the House of Delegates. On this account the ambition of this body to branch out in larger activities must be tempered by total funds available until such time as our dues are increased.

The secretary a short time ago received from the American Red Cross Society letters to be mailed to every county secretary in the state. Each county unit is asked to constitute a committee on Red Cross Medical Work, notifying the National Committee when this is accomplished. Since this request has the sanction of the American Medical Association as expressed at the recent meeting at Detroit, it is hoped that every county secretary will see that this committee is appointed and make prompt replies.

The important item in connection with the registration at Fort Wayne is to fill out the registration blank as directed, in which instance it will not be necessary to present your membership card. Under the present plan it is easier for the clerk to register you with this blank than it is with the card. Please comply with the directions, noting especially that your exact address and full name is requested in order to correct any errors in the existing file.

The tabulated councilor reports are herewith appended.

Respectfully submitted,

CHARLES N. COMBS, Secretary.

REPORT OF COMMITTEE ON ARRANGEMENTS

House of Delegates, Indiana State Medical Association.

Gentlemen: Your Committee on Arrangements has little to offer other than to advise you that all of the arrangements for the Fort Wayne session of the Association have been completed, and we hope with as much satisfaction to you as to your committee.

Fortunately we were able to secure the entire club house owned and occupied by the Elks, where all of the meetings of the Association, except the meetings of the House of Delegates and the Council, are to be held. The Elks also have extended the social features of the Club, and have made it possible for the Association to enjoy the many benefits obtained by your committee at a very nominal cost.

The Anthony Hotel has been selected as hotel headquarters, and the Commercial Club has been selected as the place for the meetings of the House of Delegates and Council, and the Scientific Exhibit. The Commercial Club extends a cordial welcome, and the courtesy of the Club House has been thrown open to the visitors.

The official program contains announcements concerning entertainments and such other information as necessary for the successful conduct of the Fort Wayne session.

Your committee especially is indebted to the committee of ladies, headed by the general chairman, Mrs. A. E. Fauve, for all arrangements pertaining to the entertainment of the visiting ladies.

Respectfully submitted,

ALBERT E. BULSON, JR., Chairman,
MILES F. PORTER,
L. PARK DRAYER.

REPORT OF THE COMMITTEE ON SCIENTIFIC WORK

House of Delegates, Indiana State Medical Association.

Gentlemen: Your Committee on Scientific Work has no report to make other than to call attention to the program for this session, which we think is on a par with programs of preceding sessions of the Association. We especially desire to call your attention to the Scientific Exhibit as an educational feature, prepared at considerable labor and expense on the part of the Exhibit Committee with Dr. Rhamy as chairman.

Respectfully submitted,

JOHN A. MACDONALD, Chairman,
DAVID ROSS,
E. M. SHANKLIN,
CHARLES N. COMBS, ex officio.

REPORT OF THE COMMITTEE ON SCIENTIFIC EXHIBITS

House of Delegates, Indiana State Medical Association.

Gentlemen: Your committee desires to report that a scientific exhibit has been prepared and will be open to the members of the Indiana State Medical Association throughout the Fort Wayne session. It will be found in the Assembly Room, on the third floor of the Commercial Club, and there also will be given the scientific demonstrations.

Respectfully submitted,

B. W. RHAMY, Chairman.

REPORT OF COMMITTEE ON MEDICAL DEFENSE

House of Delegates, Indiana State Medical Association.

Gentlemen: This year has seen much development in the line of disposing of cases. It has been a year of victories. In Indianapolis, we have been fortunate in the three cases tried by jury at that point. In each case, a verdict was returned for the defendant. Two of these cases were bone fracture cases, the other a claimed actionable infection.

In Hendricks County the committee, acting as it judged best for the profession at large, undertook to assist in the defense of a case that assailed the law governing the admission of the insane into the state hospitals, and won in the lower court. This verdict was appealed by the plaintiff, but both this decision and the present law governing insanity inquests were upheld by the upper tribunal. In Greene County, a verdict was obtained. Several cases have been abandoned. The expense per case is not showing any tendency to increase and we closed the year in sound financial condition.

We believe the work of the committee has been handled in a business-like manner, but suggest that our accounts be examined by an appointed auditing board. We further are of the opinion that medical defense for its members by the State Medical Association, has proved itself beneficial and valuable and should continue so to be.

FINANCIAL STATEMENT

Balance in fund at last published report....	\$4,617.50
Received from Dr. Combs, the Association treasurer	1,926.00
Interest on savings deposit.....	116.21
	<hr/> \$6,659.71

EXPENDITURES

Compensation of general counsel.....	\$390.00
Bond of chairman.....	15.00
Taxes for 1915.....	75.90
Stationery	3.65
Telephone .....	.71
Thorner case	98.00
Cook and Custer case (closed).....	104.95
Ward case (closed).....	125.00
J. B. Long case No. 1 (closed).....	109.75
J. B. Long Case No. 2 (closed).....	100.00
H. H. Long Case.....	25.00
Sutherland and Fargher Case.....	25.00
Shoemaker Case .....	.61
Carter Case (closed).....	25.00
Carson Case	30.00
Baxter Case (closed).....	75.00
Deputy Case (closed).....	135.00
Bowers Case (closed).....	50.00
Wells Case (closed).....	225.00
Thomas Case (closed).....	75.00
	<hr/> \$1,688.57
Balance in fund Sept. 1, 1916.....	4,971.14
	<hr/> \$6,659.71

We have adhered strictly to the by-laws established for this committee, save in one respect, namely that of remuneration to the members of your committee. We prefer to devote our time and services without pay other than your honorable recognition.

Respectfully submitted,

JOSEPH RILUS EASTMAN, Chairman,

ALBERT C. KIMBERLIN,

ALBERT E. STERNE,

Committee Medical Defense.

By ALBERT E. STERNE, Vice Chairman.

REPORT OF COMMITTEE ON NECROLOGY

House of Delegates, Indiana State Medical Association.

Gentlemen: From Aug. 1, 1915, to July 31, 1916, 126 physicians of Indiana have passed away by death. Their names and date of death have been properly recorded in THE JOURNAL of the Indiana State Medical Association.

I must mention one name, Dr. John M. Kitchen of Indianapolis, who died Feb. 5, 1916, aged 90 years. With the death of Dr. Kitchen passes the last of the earliest members of the Indiana State Medical Association. A few years ago he wrote me: "I am like a passenger waiting at a station for a delayed train which he knows will come." The delayed train finally came!

G. W. H. KEMPER, Chairman.

REPORT OF COMMITTEE ON HEALTH,
PUBLIC INSTRUCTION AND
MEDICAL PUBLICITY

House of Delegates, Indiana State Medical Association.

Gentlemen: Your Committee on Health, Public Instruction and Medical Publicity desire to present the following report:

Your committee has attempted a survey of available material for teaching preventive medicine to the profession or public, and presents a list of agencies that may be of some service to the members of this Association and others. In some instances the secretary of the county medical society has not been familiar with the agencies in his locality. The list is not a complete one, but is a start, and with a small appropriation to cover actual expenses, the list can be completed until all agencies would be included.

Some local medical societies do not take as much interest in the education of the public as some outside organizations, and oftentimes the work of the latter puts them in position to dictate the public health and welfare activities of the community without giving due consideration to the local medical profession. The remedy is for the local medical society to become the recognized authority in the community on all things medical.

The last legislature turned down a bill which had been drafted by the Indiana Society for the Prevention of Tuberculosis and endorsed by the legislative committee of the Indiana State Medical Association and State Board of Health. Had the organizations given the bill proper consideration their endorsement should have been sufficient and an educated public would demand that the legislature pass the measure. A non-medical member presented the present ridiculous law and secured its passage without consideration. This law is a reflection on the entire medical profession. How can a repetition of this be prevented? By awakening the medical profession to the just demands of the public for enlightenment on medical subjects sufficient for them to procure sufficient agencies for their protection, intelligently selecting medical advisers and sufficient opportunity for proper treatment.

The commission appointed by the governor to report on mental defectives in Indiana has been at work for about one year. A meeting is being planned for the purpose of organizing the Indiana Society for Mental Defectives and carrying to the public the work of this commission, that sentiment favorable to needed legislation may be developed, before the legislature meets. The members of this Association should become interested in this organization.

The needed legislation recommended in the report last year should not be forgotten, and the individual members should have early and late conferences with legislature members and candidates.

Respectfully submitted,

OTIS B. NESBIT, Chairman.

SOME PREVENTATIVE MEDICINE TEACHING AGENCIES

A questionnaire sent to the state institutions and the secretaries of county medical societies by the Committee on Health, Public Instruction and Medical Publicity asking them to list available material, such as exhibits, lantern slides, motion picture films, lecturers, special workers, literature, etc., for the teaching of any phase of preventative medicine to the profession or public.

Twelve county secretaries responded, ten said their county had no available material.

The following agencies were listed:

STATE INSTITUTIONS

*Indiana State Board of Health, J. N. Hurty, M.D.,
Secretary, Indianapolis*

Exhibit:

Subject—Every Phase of Public Health.
Space—400 square feet.
Terms—Free.

Lantern Slides:

Subject—All Phases of Public Health.
Number—1,000.
Terms—Free.

Motion Picture Films:

Have fourteen films on various health subjects which are loaned, free.

Lectures:

Have five lecturers. Will lecture on any phase of public health. Terms, free.

Literature:

Circulars on management and prevention of the infectious diseases for free distribution. "Baby Book," an instructor for mothers, free to mothers. Annual Reports and Monthly Bulletin on request.

Laboratories:

Open to physicians for study.

*Extension Division, Indiana University,
Bloomington*

Will furnish detailed information concerning lecturers, Expenses, etc., and list the following:

Clarence E. Edmondson, Instructor in Physiology.

Subject—Sanitation and Hygiene.

Charles P. Emerson, M.D., Dean of the School of Medicine.

Subject—1. The Message of Modern Medicine.
2. Modern Hygiene—Mental and Physical.

Murray N. Hadley, M.D., Associate in Surgery.

Subject—How the Public Can Aid in the Cure of Cancer.

Edna G. Henry, Director Social Service Department, Indiana School of Medicine.

Subject—1. The War Against Disease. 2. The City's Burden.

Frank F. Hutchins, M.D., Professor of Mental and Nervous Diseases.

Subjects—1. The Borderland of Sanity. 2. The Prevention of Insanity. 3. The Conservation of Nervous Energy.

Ernest H. Lindley, Professor of Philosophy and Psychology.

Subjects—Mental Economy and nine other subjects.

Burton D. Myers, M.D., Professor of Anatomy.

Subjects—The Kallikak Family (a Study in Inheritance, illustrated).

Firnanders Payne, Associate Professor of Zoology.

Subject—Heredity in Man.

Frank B. Wynn, M.D., Professor of Medical Diagnosis.

Subjects—1. Recreation and Efficiency. 2. Parks, Playgrounds, and American Citizenship.

Motion Picture Films:

The extension department act as an exchange for a large number of films and can often supply or obtain films on the special subjects desired.

Expense—Transportation charges.

Exhibit and Conference:

A Public Health and Welfare Exhibit are supplied, and Conference held in a limited number of places.

Indiana State Tuberculosis Hospital, Rockville

Exhibit:

Showing the Result of Patients Treated in the Hospital.

Space required—Four feet wall space; weight, 50 to 75 pounds.

Terms—Transportation to be paid by borrower.

Literature:

Annual Report. Rules of Hospital and Reprints on Tuberculosis. Free to those applying.

Speaker:

C. J. Stephens, M.D., Supt., can be procured for meetings where expenses are provided.

*Indiana School for Feeble-Minded Youth,
Fort Wayne*

Dr. George S. Bliss, Supt., has fifty lantern slides, and will give illustrated lectures on the general subject of the feeble-minded. Local committee to provide lantern and pay his expenses. Will speak on any subject connected with the feeble-minded; where the lantern is not desired, his expenses to be paid.

*Central Indiana Hospital for Insane, Indianapolis
George F. Edenharter, M.D., Supt.*

Offer to physicians and students the following courses.

1. Mental Pathology. 2. Mental and Nervous Diseases. 3. Neuro and Mental Pathology. For particulars write the superintendent or Indiana School of Medicine.

*Eastern Indiana Hospital for the Insane
Dr. S. E. Smith, Med. Supt., Richmond*

Dr. Smith will respond to invitations to speak on the mental defectives wherever possible and his services are desired by medical societies, civic and club organizations.

STATE SOCIETIES

*Indiana Society for the Prevention of Tuberculosis
210 Public Savings Bldg., Indianapolis*

Exhibit:

Four 3 by 5 compo boards showing by tack maps the antituberculosis work in Indiana.

Terms—Transportation and care.

Motion Picture Films:

Through the National Association for the Study of Tuberculosis, 105 East Twenty-Second Street, New York, any one of one-half dozen 1,000-foot reels of antituberculosis dramas may be procured at the rate of 50 cents per day and transportation.

Lecturers:

Name—Different ones from different parts of the state.

Subject—Prevention of Tuberculosis, etc.

Terms—Simply expenses.

Special Workers:

Name of local educator available for antituberculosis campaigns in any parts of Indiana on application to this office; \$25 per week and transportation.

List of Printed Matter:

Subject—Prevention and cure of tuberculosis circulars and booklets.

Terms—Gratis.

- A clinician of ability will be supplied to conduct tuberculosis clinic in connection with district meetings if local committee will supply clinic material and bear traveling expenses and entertainment.

COUNTY AND CITY

*Lake County: Hammond Board of Health
W. D. Weis, M.D., Secretary*

Lantern Slides:

Subject—Public health—50 slides.

Terms—Expenses and lantern.

Motion Picture Film:

Fly film.

E. M. Shanklin, M.D., Hammond

Lantern Slides:

Two hundred on Industrial Conservation.

Terms—Free, with speaker. Expenses required.

O. B. Nesbit, M.D., Gary

Medical Supervision of Schools.

Oral Hygiene.

Porter County

*H. E. Gowland, M.D., County Health Commissioner
Valparaiso*

Has material used as Rural School Health Exhibit, and other exhibit material that can be borrowed.

*C. A. Zinn, M.D., Health Commissioner
Frankfort*

Has County Health Exhibit.

SOME EXPERIENCED SPEAKERS AVAILABLE

A. E. Bulson, Jr., M.D., Fort Wayne.

Conservation of Vision.

Severance Burrage, Indianapolis.

The Tuberculosis Problem.

Paul Bowers, M.D., Michigan City.

Crime and Insanity.

S. J. Young, M.D., Valparaiso.

Conservation of Life.

G. F. Keiper, M.D., LaFayette.

Conservation of Vision.

C. C. Bassett, M.D., Goodland.

Disease Prevention.

George W. Spohn, M.D., Elkhart.

Conservation of Vision.

Eric Crull, M.D., Fort Wayne.

Prevention of Tuberculosis.

Indianapolis Health Department

Has a quantity of exhibit material and some speakers. Write Dr. Morgan.

NATIONAL AGENCIES

The American Medical Association

Maintain a speakers' bureau and can furnish speakers of state and national importance. Usually free. Address, Frederick R. Green, 535 North Dearborn Street, Chicago.

U. S. Public Health Service, Washington, D. C.

Supplies speakers and special workers. Requests usually being made through the state board of health. This bureau has established a Stereopticon Loan Library with over 2,000 views, dealing with the aspects of various public health problems.

The slides are classified by diseases and subjects and includes the following:

Alaska, eighty-three slides.

Children and Children's Diseases, fifty slides.

Health Exhibits, ninety slides.

Hookworm, ninety slides.

American Indians, fifty slides.

Leprosy, forty-five slides.

Malaria, 275 slides.

Milk, eighty slides.

Parasites and Organisms, 200 slides.

Pellagra, sixty slides.

Plague, 500 slides.

Smallpox, ninety slides.

Trachoma, 120 slides.

Tuberculosis, 100 slides.

Typhoid Fever, 350 slides.

These slides are loaned to physicians, health organizations, educators, welfare workers, and others, without cost. Persons desiring slides should write The Surgeon-General, U. S. Public Health Service, Washington, D. C., stating the subject they desire slides to illustrate, and a catalog will be sent giving list of slides on the subject from which selections may be made. The only expense to the borrower is transportation charges.

National Council of Safety First, Chicago

Headquarters for exhibits, slides, films, and information on safety first matters.

*National Committee for Mental Hygiene
50 Union Square, New York*

Supplies lectures and literature.

U. S. Bureau of Mines, Washington, D. C.

Will furnish lecturers and demonstrators of first aid and resuscitation in some instances. Charts and lantern slides.

REPORT OF COMMITTEE ON PUBLIC POLICY AND LEGISLATION

House of Delegates, Indiana State Medical Association.

Gentlemen: Your Committee on Legislation and Physicians' Welfare respectfully offers the following report:

We would recommend that the State Anti-Narcotic Law be amended and made to conform to the Harrison Anti-Narcotic Law.

It is rumored that the National Association of Druggists will endeavor to have a law passed at the coming legislature to compel physicians to write prescriptions for all patients and not allow them to issue any medicine at the bedside. Such a law would be taking away the rights of the physician, besides doing great harm to the public. We condemn such a law as unjust and uncalled for.

We condemn fee splitting as unjust and unprofessional, and no reputable physician should tolerate it.

We recommend that no party or cult be allowed to practice medicine in Indiana without first passing an examination before an examining board, and that all shall be measured by the same standard.

We recommend that the Workmen's Compensation Law be so changed that the injured party may employ any physician to his liking, provided that the physician selected is licensed and in good standing in his community, and that he shall have the same fees that prevail in the locality where the injury occurred, and that the company shall pay full-time hospital and medical fees instead of for thirty days only.

As people are demanding so much from the boards of health over the state, and will demand more each year, and, as a practicing physician cannot spare the time to look after it, we urge the coming legislature to pass a law creating an all-time health officer for each county.

W. R. MOFFITT, Chairman,
GEORGE T. MACCOY,
WILLIAM N. WISHARD.

REPORT OF COMMITTEE ON CONSERVATION OF VISION AND HEARING

House of Delegates, Indiana State Medical Association.

Gentlemen: The Committee on Conservation of Vision and Hearing is not an established committee by the Indiana State Medical Association. As there were no reports in 1914 and 1915, many of the efforts of our committee had to be pioneer. If this would be made a permanent committee, that is, if there would be an annual report to the House of Delegates, and a complete report to the succeeding committee, very much more could be accomplished for the Indiana State Medical Association and the citizenship of our state.

There are thirteen men on our committee, representing one from each congressional district. Because of the geographical distances, all communications had to be by letter, and as many physicians are slow to answer letters, it was late in the year when the real work of the committee began. Some of the committee were prompt to answer letters, and accomplished much during the year. It was the original intention to have a report from each district chairman, but because of the irregularities, this plan had to be abandoned.

This report contains the opinions of the various members of the committee as given to the chairman.

The House of Delegates might do well to consider at least two questions: First, Should the Indiana State Medical Association have a permanent committee on conservation of vision and hearing? Second, Because of the professional cold feeling toward health movements in some sections of the state, should the Indiana State Medical Association put its stamp of approval on all legitimate movements for the improvement of the citizenship of our state?

With one and possibly two exceptions all the members of the committee approve both questions.

The appointment on a committee, by the president of the Indiana State Medical Association, is a responsibility, and should not be considered a "position of honor." The object of any medical body is to

improve self, and thereby benefit humanity. The Indiana State Medical Association expects and demands of its committees to make investigations and report its work to this body, the House of Delegates.

With a state chairman, thirteen district chairmen and ninety-two county chairmen, an organization could be completed that in ten years, would make the state of Indiana excel all other states in the physical status and the intelligence of her citizens.

As stated above, the work of the committees did not begin until late in the year. Even with our partial organization there were made by physicians over the state seventy-five addresses, with a total of 6,810 listeners. In some sections of the state there is no compulsory examination of the schoolchildren, but the teachers are taught to make the examination, as directed by the National Association.

In Elkhart County the schoolchildren of the country and city schools were practically all examined. A record has been made of the physical and mental standing of all the pupils of the county. This record will be handed down to succeeding teachers and school officers. Regular blanks were supplied by the school officers to the examiners. The schools of our state keep a record of the intellectuality of every pupil from the time it enters school until he leaves high school. If an accurate record is kept of the physical status the succeeding teachers and school officers will be able to place all pupils where they belong. Efficiency in our schools is the desideration sought, and only by separating or classifying the effectives and defectives, can this be accomplished.

Besides the Record and Warning cards gotten out by the Committee on Conservation of Vision and Hearing the Indiana State Board of Health, under the guidance of Dr. Hurty, issued printed suggestions on the care of the eyes and ears, copies of which will be handed to the House of Delegates.

The *active duties* on the Committee of Conservation of Vision and Hearing make one more humane, and broader professionally. The past year some members of the committee have made an effort to correct defects in the poor. There can of course be no compensation in all such work, but it is a great satisfaction and a lift to humanity. Many of our worthy poor have pure blood and a good lineage, and if the physical defectives are corrected and educated we will raise them from the lowest to a higher strata of society; this will make them bread earners instead of dependents. This honorable House of Delegates must understand that the usefulness of this committee is unlimited, if it has the authority and finances.

It might be to the interest of the Association to favor all legitimate "public health movements." Articles on medicine and surgery in our dailies and magazines are eagerly read by the general public. In fact the people demand a knowledge of how to live and how to avoid disease. The movement is in the air, every one is seeking knowledge along this line, and someone will educate the laity. Will it be the medical profession or some pretenders? If the people are to be educated correctly and sanely, it must come from the physicians of the state. It is a settled fact, if the medical men of the state will not avail themselves of this educational opportunity, others will. Unfortunately, in some of the counties of the state, the profession is not harmonious. The profession divided into factions makes it difficult to

do public work, because, if one faction makes addresses on the care of the eyes and ears, the other factions refer to the public spirited physicians as quacks.

Nothing so unites the profession of a county and gains the good will and confidence of the laity as harmony in our ranks. It was reported to the committee that in some cities the profession refused to address the teachers' institutes, farmers' institutes, parent-teachers' associations and women's clubs. The officers of the various organizations secured the services of the osteopaths, chiropractors, preachers and Christian scientists. One merchant put it thus: "We prefer the medical profession on all subjects pertaining to health; but if we cannot secure any of you physicians, we must look elsewhere."

If physicians are not as public spirited as men in other professions, it is because of the nature of their work. As to education, there is no profession that can compare with the high standard of medical education. Physicians have complained to our committee that they could not talk in public. With the professional preparation that all physicians must have, with complete saturation of the subject and willingness to labor without compensation, no physician should fear addressing public audiences. The practice of medicine and surgery demands so much of a physician's time that he has but little time for self or public improvements.

Statistics and the history of the blind and deaf have taught up that practically all blindness and deafness might have been avoided. The records of our asylums have shown us that it requires millions of dollars annually to support our institutions. This is true of our blind and deaf asylums, and all institutions for the physical and mental defectives. If it is humanitarianism and good business to avoid disease in the individual, then it is surely right and profitable for the state and its citizens to encourage the health propaganda that is advocated by the Committee on Conservation of Vision and Hearing.

Faithfully,

GEORGE W. SPOHN, Chairman.

REPORT OF AN A. M. A. DELEGATE

House of Delegates, Indiana State Medical Association.

Gentlemen: Your president has asked me to make a report concerning the principle activities of the House of Delegates of the American Medical Association.

At the LaFayette session I was elected a delegate to the American Medical Association. The session of 1915 was held at San Francisco. The Hoosier special arranged by Dr. Chappel and managed by Dr. David Ross, both of Indianapolis, was a splendidly arranged affair, and thoroughly enjoyed by all, there being two special coaches filled with doctors and their families. The trip was all that could be asked and the reception given by the profession by various towns will ever be remembered by all. The scenery and many places of interest will never be forgotten. The meeting at San Francisco was well attended and the place of meeting was ideal, all the sessions and meetings being held under the roof of the Civic Building, the largest of the kind in the United States. The greatest interest in the meeting

of the delegates was a proposal to organize a National Board of Medical Examiners which was the one thing President Rodman hoped to secure during his year as president. The only sad part of it was, he died before it had been completely adopted.

The 1916 session was in Detroit, and was well attended by Indiana doctors. The death of President Rodman and Henry B. Favill was deplored by all, and the work for a higher standard of medical education and social insurance occupied most of the time. Dr. Frank B. Wynn was highly complimented for his long and efficient work in the Scientific Exhibit. The delegates from Indiana were all present and all but one at San Francisco, and his place was filled by our secretary, Dr. Combs. At Detroit they secured for Indiana the fourth vice president in the person of our president, Dr. George F. Keiper, an honor we all appreciate. At both sessions I was impressed with the high standing of the delegates and the fact that if we get a great deal of consideration we must keep the delegates there long enough to get acquainted and know the business of the Association. I hardly think I would care to be a delegate again, but I will ever feel a debt of gratitude to the Association for the honor you have already conferred. Drs. Porter, Eastman and Bulson all stand high with the House of Delegates and the National Association, and help keep Indiana in the front ranks of the great profession we all love.

CHARLES H. GOOD.

THE report of the Council on Pharmacy and Chemistry that appeared in one of the recent issues of *The Journal of the American Medical Association* with reference to the "Hypophosphite Fallacy," is of unusual importance and demands the attention of every practitioner. A great many physicians have been misled into believing that hypophosphites are splendid remedies, especially valuable in cases in which it is desired to introduce phosphorus into the body. The experimental evidence gathered by the Council shows conclusively that the hypophosphites have "no specific value as a source of phosphorus for the body." There is more available phosphorus in half a glass of milk than in three large doses of hypophosphites of 15 grains each. The conclusions submitted by Marriott, the experimenter with the hypophosphites, to the Council are briefly summarized thus: "There is no reliable evidence that they exert a physiologic effect; it has not been demonstrated that they influence any pathologic process; they are not 'foods.' If they are of any use that use has never been discovered." On the basis of this work and report, the Council has refused recognition to a number of hypophosphite preparations now on the market. Every physician is urged to become familiar with the names of the hypophosphite preparations included in this report of the Council.

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INDIANA STATE MEDICAL ASSOCIATION

Devoted to the Interests of the Medical Profession of Indiana

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EDITORIALS

OUR PRESIDENT

George F. Keiper, President of the Indiana State Medical Association, was born at Lafayette, Ind., on March 26, 1866. He attended the public schools of Lafayette, and later at Easton, Pa., where his parents sojourned for a short time on account of the ill health of the father, Dr. Christian B. Keiper. His college education was acquired at Depauw University, where he was graduated in 1887 with a B.A. degree, and from which institution he was awarded the M.A. degree in 1890. His medical education was obtained at the University of Michigan, where he graduated in 1890.

Immediately after receiving his medical degree, he began the practice of medicine at Lafayette, Ind., where he has continued to practice ever since with marked success. During the early years of his practice he devoted himself to general work, but later confined himself to diseases and surgery of the eye, ear, nose and throat.

He was married on July 9, 1890, to Miss Mary Alma Lloyd of Lafayette.

Dr. Keiper has held and continues to hold many prominent positions. Since 1898 he has been a trustee of Depauw University. He has twice been Vice President of the Indiana State Medical Association, first in 1899 and again in 1912. He was the first chairman of the Eye, Ear, Nose and Throat Section of the Association. At present he is one of the board of education in the city of Lafayette, and he holds the position of eye and ear surgeon to St. Elizabeth's Hospital, St. Joseph's Orphanage, Tippecanoe County Children's Home, St. Anthony's Home for the Aged, and the Indiana State Soldiers' Home, all of Lafayette; and is local eye and ear surgeon for the Monon Railway and the United States Pension Bureau. At the recent Detroit session he was honored by being elected Fourth Vice President of the American Medical Association. He is a member of the

American Laryngological, Rhinological, and Otological Society, American Academy of Ophthalmology and Oto-Laryngology, fellow of the American College of Surgeons, member of the Sixth and Ninth International Congresses on Otology, member of the Ninth International Congress on Ophthalmology and the American Medical Association.

Dr. Keiper has written many articles pertaining to the eye, ear, nose and throat, and for many years has been an active worker in the Indiana State Medical Association. He was the prime mover in the creation of *THE JOURNAL* to take the place of the old bound transactions.

Dr. Keiper's ability and pleasing personality have brought him friends and deserved success both in and out of the profession, and the Association has done credit to itself in honoring him.

**THE SERUM TREATMENT OF
INFANTILE PARALYSIS**

In a very recent publication Flexner gave to the profession all the information to be had on this subject. He referred to the work of Netter, who was the first to apply this method of treatment in cases of poliomyelitis in man. The results which the latter obtained were regarded as "highly favorable." The serum was obtained from persons who had had the disease some time previously but had fully recovered.

Such a method of treatment is the one that would be expected to yield the best results in a disease of this type. If it is true that in infectious diseases specific antibodies are formed, it must be true that in poliomyelitis there are formed in the blood antibodies the function of which is to destroy the invading microorganisms. These specific antibodies when brought in contact with the specific germ causing the disease should, theoretically at any rate, have an inhibitory effect on these germs.

Whether in practice the use of such a serum will really yield the striking results that are expected, it is too early yet to say. Specific antisera often are without beneficial effect. Nearly every one has had or knows of cases of general streptococcic infection in which anti-streptococcic serum yielded results that were absolutely disappointing. The ideal method of treating poliomyelitis would be to introduce a specific curative agent directly into the subdural space. The action of the specific remedy when brought directly in contact with the germ

would be such as to bring about a prompt cure in almost 100 per cent. of the cases. But such a curative drug is not yet in sight. No doubt some day we shall have it. Until then we must use the best we have, and in the present state of our knowledge or lack of knowledge regarding the therapy of this disease the use of human serum containing specific antibodies, that is, serum from those who have gone through the disease and have completely recovered, strikes one as the method that promises the greatest success.

Since it is believed that the serum of recent cases ought to contain a higher concentration of the specific antibodies than the serum of old cases, the former would probably be better than the latter. Doses of from 5 to 20 c.c. are advised. The dose in each case may be determined by the age of the patient and the amount of serum available. The serum should be injected subdurally. The same precautions must be observed as when injecting any other kind of therapeutic substance into the craniospinal cavity. The injections may be repeated several times at twenty-four-hour intervals, depending on the clinical considerations.

Although this method of treatment is the best we have to offer at present, its real value, as already indicated, will have to be measured by the clinical results obtained with it. What may be expected of the serum treatment is "the prevention or minimization of the paralysis when employed in the preparalytic stages, and the arrest of its extension when used in progressing paralytic conditions."

EARLY DIAGNOSIS

The more we learn about disease and the more we understand the nature of the abnormal changes underlying disease, the more are we impressed with the importance of early diagnosis. So far as the patient is concerned, making the diagnosis of a disease in its incipency is the greatest service his medical adviser can render him. Whether the patient is willing to accept and act on the advice given him or not is a different problem altogether. If the physician has recognized the nature of the trouble and has given his patient the benefit of his knowledge his responsibility has ended. He has done his work well, and he will never have cause to regret it.

Early diagnosis obviously depends on two factors: the patient and the physician.

The patient must present himself for examination early enough in the course of his disease. Too often patients come for medical advice and help at a stage when cure of the disease is impossible. Hence the importance and value of the propaganda to disseminate among the laity such knowledge as may help in educating them in that direction. The beginning of a disease in most cases manifests itself by certain signs and symptoms, some of which may be significant and some insignificant. The public should be taught to recognize those signs and symptoms which are significant as soon as they appear, and they must be impressed with the absolute necessity of demanding and undergoing a complete clinical examination at that stage. They should understand that in disease it is literally true very often that "he who hesitates is lost."

The rôle that the physician plays in the matter of early diagnosis is such that he can save a life or endanger it. The patient generally believes what the doctor says about his complaint. If, then, the doctor has failed to diagnose the presence of an organic disease when it could have been diagnosed by a systematic, complete and careful study, an irreparable mistake has been made, a mistake for which the confiding victim will pay the penalty. The physician must be on his guard always. "Early diagnosis" should be his watchword. He should remember that very often complaints of an obscure kind may be due to organic disease which is just beginning, and it may be very difficult to establish an accurate diagnosis. At this stage the skill and attention of the doctor are needed by the patient more than at any other stage. Examinations should be carried to the limit: physical, laboratory, roentgenologic, every kind must be made and repeated as often as necessary. In such cases too much examination is far better than not enough. In doubtful cases consultation is not only indicated but necessary. Indeed, the greater part of the public still believe quite firmly in the old adage "two heads are better than one," and they are quite willing to cooperate in having as many "heads" as may be necessary to arrive at a definite conclusion.

The physician must train himself by study, observation and examination to be able to decide for himself as far as possible all the questions involved in early diagnosis. As a student he gets only the fundamentals; as he improves with experience he learns more and more that which is of value to him as an aid in the early recognition of disease. If he finds that he is

not so keen as he should be he should take steps to improve himself. There is abundant opportunity right here in our own country to learn all that there is to be known in every branch of general diagnosis. He who lacks the knowledge and makes no attempt to acquire it is bound to fall before the advance of the progressive physician. There ought to be no place in the practice of medicine for the sloth. We must learn as we work, and the more we work the more we should learn. The more we know, so much better will be the service we can render unto mankind, and surely one cannot know too much when it comes to the question of early diagnosis.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

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Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

THE TIME.—September 27, 28 and 29.

THE PLACE.—Fort Wayne.

THE ATTRACTION.—The annual session of the Indiana State Medical Association.

THE Association is to be congratulated on having three distinguished guests for the Fort Wayne session. Dr. Joseph Bloodgood of Baltimore and Dr. Henry A. Christian of Boston will deliver popular addresses on Thursday evening and take part in the discussion of papers before the various sections. Dr. William Campbell Posey of Philadelphia will deliver an address before the Eye, Ear, Nose and Throat Section.

FORT WAYNE can take care of any ordinary influx of visitors, but the fact remains that the city has grown very rapidly during the last five years and is really outgrowing its hotel facilities. Consequently, it is just as well that those who are expecting to attend the Fort Wayne session should engage their hotel accommodations in advance. The proprietor of the Anthony, the hotel headquarters of the Asso-

ciation, has advised the Committee on Arrangements that he will give preference to the doctors on September 27, 28 and 29. The other hotels also are making preparations to care for a goodly number of the medical visitors. But to make sure of accommodations, reservations in advance should be considered desirable.

THE preliminary announcement of the next meeting of the Northern Tri-State Medical Association has just been made. It will be Indiana's turn to entertain the society, and the next meeting is scheduled to be held at South Bend on Oct. 24, 1916. The physicians of this state ought to exert their best efforts to make this next meeting a most successful one. This organization is well known to all of us. If it is not, it ought to be. Every Indiana physician ought to be affiliated with it. It always has done good work, and it is now doing better work than ever. Those of us who attended the last meeting at Toledo will not soon forget the paper written by C. H. Mayo and read by W. J. Mayo. Let us all wake up and bear in mind to be on hand in South Bend when the meeting opens.

THE American Rights League is the name of a new society reported as being organized for the purpose of upholding the duty of the republic in international relations. Dr. Richard C. Cabot of Boston is recording secretary, and he is endeavoring to enlist the support of his fellow practitioners. As a matter of fact, it is an attempt to place this country on record as sympathizing with the cause of the allies, and in the declaration of principles the Teutonic powers are bitterly condemned and an appeal is made that our government should take appropriate action to place this nation on record as unalterably opposed to the aims and methods of the Teutonic alliance, and as deeply in sympathy with the efforts of the entente allies to relieve the menace of Prussian militarism. Many of us may sympathize with one or the other of the warring factions in Europe, but we believe that so far as this nation is concerned it should continue to remain absolutely neutral. It is time enough for us to take sides when our toes have been stepped on.

FOLLOWING THE JOURNAL's publication of editorials and editorial comments concerning the reduction of the medical examination fee by certain large life insurance companies, we have received some letters from members of the

laity giving some inside information concerning failure of some of the insurance companies to live up to promises given the policy holders. As an illustration, a policy holder sends us the printed statement issued by the Equitable over twenty years ago in which an estimate was made of the total amount of surplus and reserve due the policy holder at the end of twenty years. Of course, the policy itself did not actually guarantee even a limited amount as reserve and surplus, but the printed literature accompanying the policy led the policy holder to believe he would receive certain returns at the end of twenty years which could be considered satisfactory. However, at the end of twenty years all estimates were found too high by more than 50 per cent., and the poor policy holder with a paid-up policy found himself worse off than he had calculated on when basing his opinion on the estimates furnished by the company. It is very evident that the large insurance companies can pay large commissions to agents and exorbitant salaries to officers, but along with the doctor the policy holder gets less consideration than he deserves and should have if our large insurance companies were economically managed.

AND now we have another cult, the "measurer." As witness, we read in a United Press bulletin from Richmond that considerable public indignation has been aroused there by the death of a baby that had been refused medical attention, but whose mother relied on the treatment given by a "measurer." Friends offered to pay for a physician, but the mother refused, voicing her faith in the "measurer." It is reported that the baby died the next day, and that several others have suffered the same fate after having been treated by "measurers." How long will the public permit the innocent and defenseless, suffering from ailments that should have the attention of skilled physicians, to be the prey of ignorant pretenders?

SOME of the hypercritical members of the medical profession have complained because the American Medical Association has conferred the presidency upon the two Mayo brothers, Dr. Wm. J. Mayo having been president of the Association in 1906 and Dr. Chas. H. Mayo having been elected president of the Association at the recent Detroit session. To our notion it is decidedly unfair to offer objection because a great honor has gone twice to the same family. As a matter of fact, the Association owes it to itself to confer honor where honor is due, and no ten men in the United States have done as much for the pro-

gress of scientific medicine as the two Mayo brothers. The unexcelled work done by the Mayos has not only given them a world-wide reputation, but it has been the means of placing American medicine and surgery on a higher plane than it has ever held before, and to create a respect for it abroad that we doubt would have been secured except through the wonderful results obtained at the Rochester Clinic. The American Medical Association would be untrue to itself if it failed to recognize the genius and ability of the two Mayos by bestowing upon each of them the one gift of the Association that should be bestowed upon merit.

DEATHS

TYNER E. LOWE, M.D., Greenfield, died August 29 from cancer, aged 40 years.

WILLIAM J. DICKSON, M.D., Brazil, died from apoplexy on August 26, aged 86 years.

BENJAMIN F. SPELBRING, M.D., died at his home in Terre Haute, August 18, aged 65 years.

ELIZABETH ROBERTS, M.D., Connersville, died August 7, after a lingering illness, aged 83 years.

AMY M. BRANDON, aged 83 years, widow of the late Dr. J. F. Brandon, died August 17 at Anderson.

RAYANT VANPELT, M.D., former physician of South Bend and Mishawaka, died at South Bend August 30, aged 65 years.

C. M. STOUT, M.D., Middletown, was instantly killed August 21 in an automobile accident. He was 40 years of age.

JOHN S. PIERCE, M.D., Redkey, died August 16 at the St. Vincent Hospital, Indianapolis, following an appendicitis operation. He was 52 years of age.

MARTIN H. FIELD, M.D., Indianapolis, aged 81 years, died August 7, following a three years' illness. He was a graduate of the Cincinnati Medical School.

JOSEPH C. CARSON, M.D., Valparaiso, died September 6, following an operation for appendicitis, aged 66 years. Dr. Carson was well known in medical circles, was formerly coroner of Portland County, and was a member of his county and state medical society.

JOHN RICHARDS, M.D., Fulton, died July 25, aged 70 years. He was born in Wabash County, Sept. 26, 1846, and has practiced medicine in Fulton for many years. He was a member of the Indiana State Medical Association.

GEORGE J. COOK, M.D., Indianapolis, died August 31 from heart trouble, aged 72 years. Dr. Cook was born near Pittsburgh, in 1844, received his early education in the Pittsburgh schools, graduated from the Kentucky School of Medicine in 1866, and practiced medicine at Louisville, Ky., until 1882, when he located at Indianapolis. He was one of the prominent figures in Indiana medical circles, specializing in gastro-intestinal surgery. For over thirty years he held this professorship in the Indiana Medical School and the Indiana University School of Medicine. In 1907 Dr. Cook was elected President of the Indiana State Medical Association, and also served a term as president of the Indianapolis Medical Society. For over twenty years he acted as business manager of the old *Indiana Medical Journal*, now known as the *Indianapolis Medical Journal*, and has written many valuable papers on his specialty. He was a charter member of the American Protologic Society, and a member of the Mississippi Valley Medical Society and American Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

INDIANAPOLIS

DR. ARTHUR E. GUEDEL spent the month of August in the Chicago clinics.

DR. AND MRS. J. F. BARNHILL have returned from an extended Eastern trip.

DR. AND MRS. A. J. CLARK were injured in an automobile accident on September 1.

DR. AND MRS. JEWETT V. REED and family spent the month of August in northern Michigan.

DR. W. N. STOUT has been appointed an aide at the City Dispensary by the City Board of Health.

DR. AND MRS. H. E. GABE have returned from Estes Park, Colo., where they spent the month of August.

DR. WILLIAM F. CLEVINGER has returned from a trip to Seattle and other cities on the Pacific Coast.

DR. JOEL D. WHITAKER suffered a broken leg as the result of an automobile accident on Sunday, September 23.

DR. AND MRS. FRED L. PETTIJOHN and daughters spent two weeks visiting points of interest on the Great Lakes.

TEN nurses were graduated on August 18 from the training school for nurses of the Dr. W. B. Fletcher Sanatorium.

INDIANAPOLIS has been having a sweeping epidemic of typhoid fever, 435 cases being reported during the month of August.

DR. AND MRS. LAFAYETTE PAGE and daughter, Miss Ruth, spent their vacation in the West, including the Glacier Park, Mont.

DR. AND MRS. JOHN F. MCCOOL spent their vacation touring the East, including the coast trip from New York to Norfolk, Va.

DR. SAMUEL J. COPELAND was married August 7 to Miss Mabel Terrill, also of Indianapolis. Immediately after the wedding Dr. and Mrs. Copeland left for an extended stay at the lakes of northern Wisconsin.

DR. J. KENT WORTHINGTON has taken over the work of the late Dr. Frederick R. Charlton of Indianapolis, and is now located in the offices occupied by Dr. Charlton. He limits his practice to urology and genito-urinary surgery.

THE Younger Physicians' Club, composed of a large group of younger Indianapolis physicians, enjoyed an outing at Page's country place on September 4. Athletic contests and a baseball game comprised the afternoon's entertainment, with a chicken dinner and dancing in the evening. Dr. Thomas Sullivan is president of the club and Dr. M. N. Hadley, secretary-treasurer.

GENERAL

DR. FRANK E. WOLFE, formerly of Corydon, has located at New Albany.

WELLS COUNTY is working for a new county hospital to be located at Bluffton.

DR. R. M. POLLON, formerly located at Stockwell, has moved to Clarks Hill.

DR. GEORGE L. PERRY of Portland has been doing postgraduate work at Chicago.

DR. R. B. WETHERILL of Lafayette spent two weeks at Lake Nipigon, Ontario, Canada.

CONTRACTS have been let and work begun August 7 on the new hospital at Portland.

DR. CHARLES R. BIRD of Greensburg spent the first part of September at the Mayo Clinics, Rochester.

DR. AND MRS. F. E. HILL and family of Muncie have returned from an extended automobile tour of the East.

THE license of Dr. E. P. Moser of Windfall has been revoked on the charge of "gross immorality."

DR. A. C. ARNETT, Lafayette, who is in service on the border, has been appointed chief surgeon for his camp.

DR. C. B. COMPTON of Michigantown is erecting a new modern cement block building to be used for office purposes.

THE commissioners of Fountain County have ordered the erection of a new \$30,000 county hospital building at Attica.

THE next annual meeting of the American Hospital Association will be held in Philadelphia September 26 to 30.

DR. JOHN CARNEY, formerly of Pymont, has removed to Delphi and will engage in the practice of medicine at that place.

DR. AND MRS. T. A. OLNEY of South Bend spent the month of August camping in the Temagami district, Canada.

DR. R. J. PIERCE of Richmond spent the month of August in Chicago taking special work in gastro-intestinal diseases.

MEMBERS of the Wells County Medical Society and their families held their first annual picnic at Boiling Springs on August 24.

DR. G. A. KELLY, who has been associated with Dr. A. P. Roope at Columbus for the past year, has located at Memphis, Tenn.

DR. M. JOSEPH BARRY announces the opening of an office at 608 Hume-Mansur Building, Indianapolis, for general practice.

THE Miller Hospital at Newcastle is to have a new charity ward equipped and maintained by the Newcastle Ministerial Association.

DR. H. C. DAVISSON of Hartford City was quite severely injured on August 7, when knocked down by a horse and buggy.

DR. R. M. FUNKHOUSER, formerly assistant physician at the Southeastern Indiana Hospital, is now engaged in practice at Evansville.

DR. C. A. WEAVER, formerly of Kennard, has located at Newcastle for the practice of medicine, specializing in diseases of women and children.

DR. O. E. DALE of Connersville and Dr. H. W. Dale of West Labanon have returned home after a ten days' stay at the Mayo Clinics in Rochester.

DR. GEORGE F. BICKNELL of Indiana Harbor was married on August 21 to Miss Pansy Miller of Greensburg, Pa., who has been in training at Mercy Hospital, Gary.

DR. D. S. CONNER of Cannelton and Dr. Ernest Schriefer of Ferdinand have formed a partnership for the practice of their profession and will be located at Cannelton.

DR. G. A. MOWRER, after a service of two years in connection with the hospital at the Indiana Reformatory, has resigned, and entered the practice of medicine at Jeffersonville.

DR. AND MRS. ALBERT DAVIS of Marion and Dr. and Mrs. John Nixon of Farmland have been taking an extended trip through the East, including Old Point Comfort, New York City and Washington, D. C.

DR. S. BROWN McCLINTIC, Peru, but for the past two years doing surgical work in the Red Cross service of the Russian army, was married on June 1, at Kermanshah, Persia, to Miss Fleanor Soukupp of Kansas.

PHYSICIANS and nurses who expect to be called on to assist in the selection of equipment for hospitals should write for "How to Equip a Hospital," just published by the Max Woche & Son Company, Cincinnati, Ohio. They will mail it free on request.

THE annual meeting of the Second Councilor District Medical Association was held at Trinity Springs, Thursday, August 17, under the direction of Dr. J. W. Strange, president, and Dr. T. A. Hays, secretary. Dr. J. B. Maples presided as toastmaster at the luncheon held at the Trinity Hotel.

THE American Medical Association, the American College of Surgeons and various other medical organizations have united in the organizing of a committee of civilian physicians and surgeons on medical preparedness. Dr. William J. Mayo of Rochester was elected chairman and Dr. Frank F. Simpson of Pittsburgh, secretary.

FORTY-TWO young medical students were granted licenses to practice medicine at the recent examination given by the State Board of Medical Registration and Examination. Twenty-eight of the forty-two were placed on the honor roll. Charles Hinchman of Connersville received the highest grades, and J. John H. Hare of Logansport and Charles O. McCormick tied for the second honors.

AN act to provide compensation for employees of the national government injured while in the performance of their duties has passed both houses of Congress and will become a law as soon as the conference committee to which it has been referred has adjusted certain minor details. This new law will increase the demand by the United States government for the services of physicians throughout the entire country. For all injured civil employees of the United States, numbering approximately 40,000, it provides medical, surgical and hospital services and supplies at government expense.

THE following bequests and donations have recently been announced: Mt. Sinai Hospital, New York, a donation of \$150,000 for the endowment of its department of abdominal surgery, by Charles A. Wimpfheimer; Hospital for Women and Children, Boston, to establish a free bed, \$5,000; Baker's Free Hospital for Women, Boston, to establish a free bed, \$5,000; Boston Children's Hospital, \$2,000; and Children's Island Sanitarium, Salem Harbor, \$1,000; all by the will of the late Mrs. R. B. Warren, Boston. Pennsylvania Hospital, Philadelphia, Protestant Episcopal Hospital, Presbyterian Hospital, Polyclinic Hospital and Samaritan Hospital, each \$10,000; Philadelphia Home for Incurables, Jewish Hospital Associa-

tion and Medical Chirurgical Hospital, each \$5,000, by the will of Hall Engles. The bequests to the Pennsylvania and Presbyterian hospitals are to endow two free beds in each institution in memory of Mr. Engle's mother, and the bequest to the Protestant Episcopal Hospital is to endow two free beds in memory of the testator. St. Mary's Hospital, Philadelphia, \$5,000 to endow a bed, by the will of George W. Nevil. Servants and Relief of Incurable Hospital and Skin and Cancer Hospital, New York, each \$5,000, by the will of Mr. Miner Vetch.

CORRESPONDENCE

DR. EASTMAN EN ROUTE TO EASTERN WAR FRONT

This letter was written by Dr. Joseph Rilus Eastman to his brother, Dr. Thomas B. Eastman, and permission given to publish the letter in THE JOURNAL:

S. S. RYNDAM, July 1, 1916.

Dear Tom:—We have had a most interesting voyage. At Falmouth, the most southwesterly English port, we put off our English passengers numbering about ninety. We lay in the harbor there for two days and two nights. It is a very pretty land-locked bay, but rather shallow, so that only small ships can dock. At night the harbor and town were pitch dark. Our tower and mast lights were out, the portholes covered and every precaution taken to guard against Zeppelin attacks. Our wireless apparatus also was dismantled. The ship's manifest was taken to London and returned after two days. Visit and search were made by very courteous English officials, who made us no unnecessary annoyance. The circumstance that our destination was Austria and our purpose to aid the Austrian wounded apparently did not prejudice these officers against us in any sense.

Leaving Falmouth we began our voyage around the north of Scotland to avoid the mine fields in the "Channel." On our bows we have had, since nearing England, a large electrically illuminated sign with the name of the ship *Ryndam* in brilliant letters for the information of submarines. A huge searchlight keeps our Holland flag astern quite conspicuously visible at night. Foggy weather has prevailed since leaving Falmouth, and we were obliged to thread our way among the treacherous rocks of the

Orkneys through dense banks of mist. The lookout over the "Cutwater" watching for floating mines could see as a rule only a few yards ahead. This morning at 6, when nearly all were asleep, we were awakened by a frightful shock, followed by ominous scraping noises and consequent hurrying and scurrying of stewards to awaken the more sound sleepers in the cabins. Our dining saloon steward, with face expressive of terror, rushed into our cabin exhorting us to dress quickly and come above, saying "Don't be excited, but the ship has gone on the rocks." I need hardly say we were up in a small part of a "jiffy"—whatever that is. Looking through our porthole we could see, notwithstanding the fog, that our ship had indeed thrust her prow over a distance of about 50 feet upward over the rocky shore of a small island. There she rested quite tranquilly. It was clear no harm could come to us, as we were in a sense on land already. No one was at all "panicky"—all treated the incident philosophically—and within an hour we backed away under our own power. Soon the band was on deck playing a lively tune—in fact, it was "Mr. Brown, Mr. Brown Had a Violin." We lay at anchor four hours until the fog lifted, then weighed anchor and headed for Kirkwall, the English port in the Orkneys. There we waited outside the harbor for an hour while the submarine nets were hauled in to allow us to pass. The submarine nets are very interesting. They pass from one small island to another and afford protection against submarines to all ships in the harbor.

We shall soon be on our way to the Norwegian coast, going directly east from the Orkneys, thence southward to Rotterdam. We shall be conveyed by a small boat for the rest of the journey, and we shall feel secure against serious accidents. Our lifeboats are all swung out on the davits, as are those of all ships in these waters now.

Aside from the somewhat unusual divertisement of this morning, it has been a very pleasant crossing, although lasting considerably longer than we anticipated. Eighteen days shall have been consumed before we reach Rotterdam.

We shall go at once from Rotterdam to our station in Austria. It may be some time—possibly two or three months—before you hear again, owing to delay of mails. All are quite well and anxious to begin work.

RILUS.

SOCIETY PROCEEDINGS

TENTH DISTRICT

Regular midsummer meeting of Tenth District Medical Society was held at "Hazelton," George Ade's country home, near Brook, on August 25. About one hundred members were present, many of them bringing their wives and families.

The scientific meeting was called to order at 1:30 with the president, Dr. E. H. Powell, in the chair. Program was as follows: "Drug Therapy, a Neglected Subject," Dr. E. E. Evans, Gary; "Acidosis," Dr. J. G. Kinneman, Goodland; "A Pile Operation for the General Practitioner," Dr. G. R. Douglass, Valparaiso. All of the papers evoked a free discussion among the members.

Excellent country dinner and supper were served to the members and their families, and after dinner Mr. Ade gave an original poem, "The Microbe's Serenade."

Both before and after the program outdoor games and contests were indulged in.

The Jasper-Newton County Society, with Mr. Ade, were hosts, and are to be congratulated on the excellence of the program and the enjoyable outing. The thanks of the society are due to George Ade for his courtesy in opening his grounds for the Society, and for the entertainment furnished.

Adjourned. A. R. KRESLER, Secretary pro tem.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION

Announcement of the Chairman of the Committee of Arrangements for the Meeting at Indianapolis, October 10, 11, and 12

To the Medical Profession of Indiana:

Under the presidency of Dr. Willard J. Stone, Toledo, Ohio, the Mississippi Valley Medical Association will hold its next session at the Claypool Hotel, Indianapolis, next October 10, 11 and 12. This meeting promises to be one of the very greatest interest scientifically, as shown by the preliminary program just issued and we hope, in addition, to make the social features of the session of the highest and most enjoyable type.

It is particularly fitting that the members of the medical profession of the state of Indiana and their wives attend this meeting, as the Mississippi Valley Medical Association was formed forty-two years ago at Evansville.

During these years of development, it has reached a high plane of scientific value, and in addition, has achieved a most enviable reputation for good fellowship and social intimacy among its membership. It is particularly this latter feature which has made the Association loved and honored by those who yearly attend its sessions.

This year we are fortunate enough to have as our guest, that most distinguished surgeon and philosopher, Dr. George W. Crile of Cleveland, who will deliver the address on surgery. Dr. Crile needs neither introduction nor laudation to the medical profession of the state, for his work always speaks for itself in the very highest terms, but we trust that the members of our profession will be eager to avail themselves of the opportunity to hear Dr. Crile's

address, together with that of our eminent president, Dr. Willard J. Stone, and that fine clinician, Dr. J. P. Sedgwick of Minneapolis, who will deliver the address in medicine.

The program of the scientific exercises is replete with things which the profession will be anxious to hear, spoken by some of the foremost authorities in this country.

There will be symposia on fractures and on syphilis, to which we desire to call special attention. It is planned to devote one entire morning to scientific demonstrations, in charge of Dr. Frank B. Wynn of Indianapolis. In these demonstrations a large number of our best local men will participate, and it is confidently expected that this feature of the meeting will prove unusually valuable.

Among those who will read papers appear some of the best known men in the central and middle west, and an unusually large number from New York, Boston and other medical centers of the East.

It has been the custom at the meetings of the Mississippi Valley Medical Association for many years, to appoint physicians prominent in the medical profession of the city of meeting, to lead discussions on various subjects presented, instead of requesting them to present papers or addresses in chief, and this will be the plan adopted this year at Indianapolis.

The local committee extends the most cordial invitation to the medical profession of Indiana to attend this meeting, and promises to those who avail themselves of the opportunity, an excellent scientific occasion and the most enjoyable social pleasures.

We hope that a very large number of the Indiana men will attend and become better acquainted with their fellows from distant cities, as well as with the home folk.

Inasmuch as the capacity of our hotels is likely to be tested to the full, just at the time of the session, namely October 10, 11 and 12, we would advise that reservations for hotel accommodations be made at as early a date as possible. Such requests may be addressed either to the hotel direct or to the undersigned.

ALBERT E. STERNE,

Chairman Committee of Arrangements.

THE MUNCIE ACADEMY OF MEDICINE

Meeting of July 14

G. R. Andrews told of an adult negro, weighing 195 pounds, who was brought to the hospital, suffering from a stab wound involving the heart. Dyspnea was profound. Pulse faint and irregular. Hurried preparations were made for operation but as the first skin incision was being made the patient apparently died. An opening was made between the cartilages of the fifth and sixth ribs. The pericardium was bulging with black blood which was evacuated. Fingers were inserted and the heart rhythmically pressed against the sternum. After a few spasmodic attempts to contract, pulsations became regular, about 86 to the minute. The heart wound was now discovered to be in the left ventricle out of which the blood spurted in jets large as a pencil. The wound was brought to the surface and plugged with the operator's finger till the edges could be grasped with forceps and coapted. The needle pricks necessary to the sutures, and even more vigorous assaults did

not disturb the rhythm of the heart, and the operation was surprising in its simplicity and the ease with which it was done. Twenty-four hours later, pulse was 120; temperature 103+, and dyspnea was returning. Forty-eight hours after operation, as the dressing was being changed, loud friction rub was detected. Pulse began to flicker and patient suddenly died, probably of cerebral embolus. The pericardium was again opened and found to contain straw colored serum. Pericarditis was present and a grayish exudate thickly covered the whole heart. When this was scraped away disclosing the original wound it appeared to be completely healed.

Dr. Andrews also reported a case of cesarean section on an eclamptic woman six and one half months pregnant. After prolonged effort the infant was made to breathe, and is yet alive.

The balance of the time was spent by the members in the discussion of the treatment of eclampsia. Surgery, morphin, veratrum vir., chloral, philocarpin and phlebotomy, each had its advocates.

Adjourned.

H. D. FAIR, Secretary.

Meeting of July 21

C. E. Sellars read a paper on "Post Partum Hemorrhage," saying: During the separation of the placenta hemorrhage is prevented by the retraction and contraction of the uterine muscle and by the thrombosis of the uterine sinuses. If there is more than one pint of blood at this stage it is best to consider it pathologic. Many hemorrhages, called atonic, are due to lacerations close to the contraction ring of Bandl. The extreme vascularization of the lower uterine segment and cervix, due to the placental implantation, permits every tear to bleed profusely. There may be a tendency to post-partum hemorrhages which has been transmitted, and is considered entirely different from hemophilia. Valvular heart diseases, toxemias, leukocythemia, alcoholism, hepatic toxemias, and chronic nephritis, are all conducive causes. The most important factor in the preventative treatment is the proper management of the third stage. It would be well that every student and nurse were required to commit to memory the words of Crede's original account of his method. Sharp hemorrhages taking place, whether the placenta be attached or separated, calls for active Crede expression, followed by rather vigorous fundal massage to cause and maintain uterine contraction and retraction. An injection of aseptic ergot deep into the thigh at this time is of great assistance in inducing uterine contraction, except in instances of adherent placenta or retained blood. In an emergency the bi-manual compression of the empty uterus, the vaginal hand grasping the cervix and the other hand on the fundus, the latter being forced downward and forward against the symphysis, thus tending to occlude the uterine blood supply, is sufficient. This is always a ready method to hold the uterus and control hemorrhage until preparations to administer a hot acidulated intra-uterine douche can be made, or to pack the uterine cavity.

The paper was illustrated by a series of good drawings showing the methods of grasping the uterus in order to control hemorrhage; the sites at which bleeding is likely to occur; proper and improper packing, and the method of fixing the uterus before it can be properly or efficiently packed with gauze.

Adjourned till September 8.

H. D. FAIR, Secretary.

DELAWARE COUNTY**Meeting of August 4**

Regular meeting of Delaware County Medical Society was held in Muncie Y. M. C. A. building Friday evening, August 4, and was called to order at 8:30 by President C. A. Ball.

Drs. Andrews and Spurgeon reported cases of fever, not of any typical type nor easy of diagnosis; the preponderance of signs being indicative of malaria.

G. R. Green, essayist of the evening, being absent, the secretary read some abstracts from current literature on the subject "Abortion," which were discussed by the members present.

G. R. Andrews favors emptying uterus without unnecessary delay when it can be done properly. "Properly" means with precautions essential to all good surgery, and the rigid technic necessary to good results. Dr. Andrews condemned the spiral curet.

F. W. Dunn believes that in general country and village practice the percentum of good recoveries will be greater if nature be allowed to demonstrate what she can or will do in the matter.

I. N. Trent believes records will prove that more women have lost their lives through meddling interference, than through lack of attention.

O. E. Spurgeon mentioned the medicolegal aspect of the question involved when a physician is asked to attend a patient who is suffering an incomplete abortion induced by herself or others. Dr. Spurgeon believes the responsibility should be shared by a responsible fellow practitioner.

F. E. Hill believes that a purely accidental abortion is very rare. Nearly every woman of nubility either knows how to abort herself or has a neighbor who is willing to show her. It is not necessary for the emergency doctor to ask many questions, and it is not likely that he will get truthful answers if he does.

W. W. Wadsworth deplored the frequency of criminal abortion, and believes many who are guilty do not consider the act a criminal one.

W. J. Molley assumes that it is the duty of physicians to take whatever means necessary to protect themselves when called to attend a patient who is miscarrying. If everything does not work out just right an innocent practitioner who is called in the emergency, may receive the blame and censure.

H. D. Fair called attention to a financial phase of the subject. There are some professional abortionists and others who start jobs they cannot or do not finish, who collect all the ready money the family has on hand, leaving nothing for the physician who is called in to clean up. Such work is entitled to a liberal cash remuneration, C. O. D., if not before.

Adjourned.

H. D. FAIR, Secretary.

DUBOIS COUNTY

The Dubois County Medical Society met in regular session at Huntingburg, Tuesday, July 18. In the absence of the president and vice president, Dr. E. G. Lukemeyer acted as chairman of the meeting.

The minutes of the previous meeting were read and approved. A report of the financial condition of the society was made.

Drs. Bigham and Baker were on the program for papers. Dr. Bigham was not present. Dr. Baker's essay "The Irregular Heart," was heard and discussed.

Dr. McKinney reported a case of convulsions and death in an infant, supposedly due to strychnin poisoning. Dr. E. Steinkamp reported a case that died some time after cholecystostomy. The cause of death somewhat obscure. Dr. Baker reported a case of sudden death nine hours after labor due to acute edema of the lungs.

Mrs. F. K., 31 years of age, housewife, born and reared on a farm. Family history good. Personal history extra good.

CASE REPORT

Present Illness: A healthy looking, well nourished woman in the first stage of labor. Primipara. Has had an uneventful gestation, amniotic fluid ruptured two days ago. Heart, lungs and kidneys are normal. Urine has been examined every two weeks for the past three months. The case was seen about 1 a. m., the position was left occipito-anterior. The cervix was dilated to about the size of a half dollar. The labor progressed nicely until 6 a. m. At this time the cervix was completely dilated, and, while the contractions were still regular they seemed to lack force. I was called away at this time and left the case in charge of a nurse, returning several hours later found conditions about the same as when I left. The cervix was well dilated, the head well into the pelvis, and the patient in as good shape as could be expected after ten hours labor. I decided to give 0.5 c.c. of pituitrin; the contractions increased in number and intensity but did not seem to be strong enough yet. About twenty minutes after the injection of pituitrin the patient developed a slight cough, although at the time I did not suspect the connection. In about forty-five minutes I gave a second 0.5 c.c. pituitrin. This did not help matters much so far as the contractions were concerned, but did cause the cough to become worse and about this time there seemed to be considerable mucus in the upper air passages (no râles in the lungs). Seeing that the pituitrin was ineffective and the patient not doing so well I applied forceps (without anesthesia) and extracted a normal healthy baby with very little effort. The placenta was delivered in twenty-five minutes by Crede method. After this the patient felt very much better but still had the mucous cough, which seemed to annoy her a great deal. I returned an hour later and found her sleeping, but with rough mucous râles over the bronchi but no râles in the lung proper. This was about her condition for the next nine hours. She would sleep a while with the mucous râles in her throat, then awaken and cough; she never complained of feeling badly although at times she complained of being "short of breath," this was attributed (by the attendant) to the extremely hot weather. Nine hours after delivery she awakened from a nap and asked for a drink of water, said that she was feeling fine. Suddenly while the nurse was away getting the water the patient began to "breathe very rapidly" and died within less than five minutes. (She did not sit up in bed.)

The meeting adjourned after a discussion of a few reports of the Cabot Clinic.

PARKE-VERMILLION COUNTY

Parke-Vermillion County Medical Society met July 18 in the parlor of the Indiana State Tuberculosis Hospital. In the absence of president and vice president, Dr. Price of Judson, ex-president, took the chair. Drs. Woodard, Stevens, Martin, Dacey, Bloomer, Price, Williamson, Gillum, White, Peare, Saunders, Connelly and Casebeer responded to roll call. Dr. Brandenberger and Mr. Taylor were guests.

Minutes of previous meeting read and approved.

Dr. Gillum proposed that resolutions be prepared on the death of the late Dr. Charles W. Overpeck.

Dr. Saunders led a quiz on the various points of typhoid fever, and the subject was thoroughly discussed by the entire society.

Mr. W. E. Taylor, chemist for the Terre Haute Water Works, gave an interesting talk on the work of that corporation in purifying the water of that city, their standard being that 80 per cent. of 10 c.c. of water should be negative to *B. coli*. His report showed that the death rate of that city had been greatly reduced since the work had been begun, and also, in dividing the typhoid cases into a city water class and a well water class, 90 per cent. of the mortality is due to well water contamination or is brought to Terre Haute from some other locality.

Dr. Rogers furnished an interesting paper (read by the secretary), but was unable to attend personally.

After adjournment of the business session, luncheon was served in the hotel lobby by Dr. Stevens.

JOHN J. CONNELLY, M.D., Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1916, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Non-official Remedies":

FIBRIN FERMENTS AND THROMBOPLASTIC SUBSTANCES (KEPHALIN).—The clotting of blood has been shown to be due to the action of the fibrin ferment on the fibrinogen of the blood. The fibrin ferment (thrombin) exists in the blood in the form of prothrombin which is converted into thrombin by the action of calcium and thromboplastic substance (thromboplastin). Kephalin, prepared from the brain, has the properties of thromboplastin. Preparations containing thromboplastin are said to be useful, when applied locally, in the treatment of hemorrhages, especially hemorrhages from oozing surfaces, scar tissue and nosebleeds. The intravenous use of thromboplastin in certain conditions has also been proposed.

BRAIN LIPOID.—IMPURE KEPHALIN.—This is an ether extract of the brain of the ox, or other mammal, prepared according to the method of Howell and Hirschfelder. It has the properties of thromboplastic substance described above. It may be applied direct to the tissues or on sponges or pledgets, or it may be used in the form of an emulsion with sodium chlorid solution.

SOLUTION BRAIN EXTRACT.—Solution Thromboplastin-Hess.—An extract of ox brain in physiologic salt solution prepared by the method of Hess. It

has the properties of thromboplastic substances described above. The solution may be applied directly to, or sprayed on the tissues or by means of a sponge or tampon.

GALACTENZYME TABLETS.—Tablets containing a practically pure culture of *Bacillus bulgaricus*. For administration in intestinal fermentative diseases. Put up in bottles containing 100 tablets each and bearing an expiration date. The Abbott Laboratories, Chicago.

GALACTENZYME BOUILLON.—A pure culture in vials of *Bacillus bulgaricus*, each vial containing about 6 Cc. Used internally for intestinal fermentative disorders and topically in nasal, aural, throat, urethral and other affections when the use of such a culture is indicated. Put up in packages of 12 vials each. The Abbott Laboratories, Chicago.

AMPOULES MERCURIC SALICYLATE-SQUIBB, 0.065.—Each ampoule contains 0.065 Gm. mercuric salicylate, N. N. R., in 1 Cc. of sterile suspension. E. R. Squibb and Sons, New York.

AMPOULES QUININE DIHYDROCHLORIDE-SQUIBB, 1 Gm.—Each ampoule contains 1 Gm. quinine dihydrochloride, N. N. R., in 2 Cc. of sterile solution. E. R. Squibb and Sons, New York.

AMPOULES QUININE DIHYDROCHLORIDE-SQUIBB, 0.5 Gm.—Each ampoule contains 0.5 Gm. quinine dihydrochloride, N. N. R., in 2 Cc. of sterile solution. E. R. Squibb and Sons, New York.

AMPOULES QUININE DIHYDROCHLORIDE-SQUIBB, 0.25 Gm.—Each ampoule contains 0.25 Gm. quinine dihydrochloride, N. N. R., in 2 Cc. of sterile solution. E. R. Squibb and Sons, New York.

AMPOULES QUININE AND UREA HYDROCHLORIDE-SQUIBB, 1 Gm.—Each ampoule contains 1 Gm. quinine and urea hydrochloride, N. N. R., in 2 Cc. of sterile solution. E. R. Squibb and Sons, New York.

AMPOULES QUININE AND UREA HYDROCHLORIDE-SQUIBB, 0.5 Gm.—Each ampoule contains 0.5 Gm. quinine and urea hydrochloride, N. N. R., in 2 Cc. of sterile solution. E. R. Squibb and Sons, New York.

AMPOULES QUININE AND UREA HYDROCHLORIDE-SQUIBB, 0.25 Gm.—Each ampoule contains 0.25 Gm. quinine and urea hydrochloride, N. N. R., in 2 Cc. of sterile solution. E. R. Squibb and Sons, New York.

AMPOULES QUININE AND UREA HYDROCHLORIDE-SQUIBB, 1 PER CENT.—Each ampoule contains 5 Cc. of a sterile 1 per cent. solution of quinine and urea hydrochloride, N. N. R. E. R. Squibb and Sons, New York.

AMPOULES SODIUM CACODYLATE-SQUIBB, 0.13 Gm.—Each ampoule contains 0.13 Gm. sodium cacodylate, N. N. R. E. R. Squibb and Sons, New York.

AMPOULES SODIUM CACODYLATE-SQUIBB, 0.05 Gm.—Each ampoule contains 0.05 Gm. sodium cacodylate, N. N. R. E. R. Squibb and Sons, New York (*Jour. A. M. A.*, Aug. 5, 1916, p. 586).

ARBUTIN-ABBOTT.—A non-proprietary brand complying with the standards for Arbutin N. N. R. The Abbott Laboratories, Chicago. (*Jour. A. M. A.*, Aug. 19, 1916, p. 586).

AMPOULES MERCURY IODIDE (RED) 1 PER CENT. IN OIL-SQUIBB.—Each ampoule contains 1 Cc. of a solution of red mercuric iodide and anesthesin, each 0.01 Gm., in a neutral fatty oil. E. R. Squibb and Sons, New York. (*Jour. A. M. A.*, Aug. 19, 1916, p. 586.)

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Powder and Tablets, 1-10 grain.

PROPAGANDA FOR REFORM

CHEMOTHERAPEUTIC TREATMENT OF TUBERCULOSIS.—In the August issue of *The Journal of Experimental Medicine*, Koga, Otani and Takano report on a new treatment of tuberculosis and leprosy. Koga reports that the treatment of animals inoculated with a preparation of copper and potassium cyanide produces healing changes in tuberculous lesions. He also reports on the treatment of sixty-three cases and thinks that his preparation, which he calls "cyanocuprol," greatly improves or cures pulmonary tuberculosis in the first or second stages and even is beneficial in the third stage. Otani also gives a favorable clinical report of tuberculous cases. Takano treated cases of leprosy with "cyanocuprol" with what appear to be beneficial effects. The Japanese investigators give no clear statement in regard to the composition of the copper-cyanide preparation which they used (*Jour. A. M. A.*, Aug. 5, 1916, p. 443).

TARTAR EMETIC AND SODIUM BICARBONATE INCOMPATIBLE.—The A. M. A. Laboratory reports that when an aqueous solution of tartar emetic is added to a solution of sodium bicarbonate a clear solution results at first, but that on standing a precipitate of antimony hydroxide is formed (*Jour. A. M. A.*, Aug. 5, 1916, p. 462).

AMBRINE.—An article "War Letters of an American Woman," in the August 2 issue of *Outlook*, contains a glowing account of the use of "Ambrine" in the treatment of burns by a Dr. Barthe de Sandfort, Hospital St. Nicholas, Paris. Ambrine is a proprietary preparation which has been on the French

market for years. It is a secret nostrum in that the proportions of the ingredients—"wax, paraffin and resin"—are not given. There is nothing original in an application of melted resin, beeswax and paraffin, although the correspondent of the *Outlook* seems to have been carried away with the idea that it is one of the great miracles of the day (*Jour. A. M. A.*, Aug. 12, 1916, p. 535).

SODIUM SULPHATE AS AN ANTIDOTE TO PHENOL POISONING.—Sodium sulphate in strong solution is one of the best known antidotes for phenol poisoning. At one time it was erroneously thought that the antidotal effect was due to the formation of sodium phenolsulphonate. It has been suggested that whatever action sodium sulphate has as an antidote for phenol may be due to some hindrance to absorption, and possibly also to added purgation. (*Jour. A. M. A.*, Aug. 12, 1916, p. 535.)

ASPIRIN.—The patent on aspirin will expire next year. The Bayer Company, the American agents, view with disfavor the prospect of losing the right to the sole manufacture of acetylsalicylic acid. This may explain the campaign of publicity which the Bayer Company has inaugurated in the lay press in which the public is urged to buy the Bayer brand of acetylsalicylic acid (aspirin) only. There can be no better time than the present for the medical profession to substitute for the non-descriptive name "aspirin" the descriptive and correct name acetylsalicylic acid. (*Jour. A. M. A.*, Aug. 12, 1916, p. 515.)

A STUDY OF "UTERINE" DRUGS.—Dr. J. D. Pilcher, W. R. Delzell and G. E. Burman, working in the Pharmacologic Laboratory of the University of

Nebraska Medical School, have studied the action on the excised guinea-pig uterus of a number of drugs which are constituents of proprietary and "patent" "female" remedies; drugs for the value of which there is little evidence and which would have fallen into disuse but for their exploitation. The following drugs lessened the amplitude of the contractions of the uterine strips, or in stronger solutions caused a complete cessation: Unicorn root, pulsatilla, Jamaica dogwood and figwort. Somewhat less active were valerian and lady's-slipper. The drugs having very weak actions were wild yam, life root and skull-cap. Blue cohosh was most active and put uterine strips in a state of tonic contraction or tetanus. The following drugs were quite inactive: black haw, cramp bark, squaw vine, chestnut bark, false unicorn, passion flower, blessed thistle, St. Mary's thistle and motherwort. The authors are confident that the actions observed would also be produced in the intact human uterus provided the drug reached the uterus in a similar concentration but that it is improbable that the concentration of drug used could ever be attained in the body. Work which is under way indicates that these drugs do not act specifically on the uterus but on smooth muscle in general and that this general action would overbalance any favorable action on the uterus. The authors conclude that the drugs examined are practically worthless and that their use is harmful as well as futile since such use tends to perpetuate therapeutic fallacies. (*Jour. A. M. A.*, Aug. 12, 1916, p. 490.)

RADIO-REM.—The Council on Pharmacy and Chemistry reports that those who are well informed on the subject of radium therapy are of the opinion that the administration of small amounts of radium emanation, such as those generated by certain outfits, is without therapeutic value. Having voted not to admit to New and Nonofficial Remedies any radium emanation generator which produces less than two microcuries of emanation during twenty-four hours, the council voted not to accept Radio-Rem outfit No. 3, Radio-Rem outfit No. 2 and Radio-Rem outfit C., each of which is admitted to produce less than 2 microcuries of emanation per day. (*Jour. A. M. A.*, Aug. 19, 1916, p. 631.)

OLIO-PHLOGOSIS.—The Council on Pharmacy and Chemistry reports that Olio-Phlogosis (The Mystic Chemical Co., Kansas City, Mo.) is not eligible for admission to New and Nonofficial Remedies. Olio-Phlogosis is to be applied externally by means of a cotton pad for pneumonia, bronchitis, pleurisy, etc. According to information sent to the council it consists of glycerine to which has been added small amounts of essential oils, iodine, resorcinol, boric acid, quinine bisulphate and sodium thio-sulphate. The council concluded that the claims for Olio-Phlogosis are unwarranted, that its composition is complex and irrational and that the non-descriptive and therapeutically suggestive name is likely to lead to uncritical use. (*Jour. A. M. A.*, Aug. 19, 1916, p. 631.)

NOVOCAIN.—Novocain was introduced about twelve years ago with the claim that it was from one-sixth to one-tenth as toxic as cocain. Hatcher and Eggleston have recently shown that the toxicity of cocain varies widely with different individuals and with the rate of its absorption into the circulation, and that novocain shows far greater variations. The authors are of the opinion that novocain has a distinct field of usefulness, but call attention to the fact that death has followed the clinical use of small doses and that

toxic symptoms have been reported by numerous observers. (*Jour. A. M. A.*, Aug. 26, 1916, p. 685.)

QUALITY OF CHLORINATED LIME.—J. P. Street, chemist in the Connecticut Agricultural Experiment Station, reports that of twenty-five samples of chlorinated lime (bleaching powder) which, according to the United States Pharmacopeia, should contain "not less than 30 per cent. of available chlorin," only three were found of full strength. Eight contained but traces of available chlorin. This is a dangerous situation when it is recalled that the public as well as the medical profession puts great dependence on the disinfecting powers of this inexpensive material. (*Jour. A. M. A.*, Aug. 26, 1916, p. 695.)

BOOK REVIEWS

PRIMER OF HYGIENE. Being a simple textbook on personal health and how to keep it. By John W. Ritchie, Professor of Biology, College of William and Mary, Virginia; and Joseph S. Caldwell, Professor of Plant Physiology, Alabama Polytechnic Institute. Illustrated by Karl Hassmann and Hermann Heyer. New-World Health Series, Book 1. Revised Edition. Yonkers-on-Hudson, New York. World Book Company, 1915.

This book is just what its title indicates. A book such as this in which facts pertaining to personal hygiene and personal health are presented in very plain and simple language fills a real need. It brings information on a subject which is of the most vital interest to all mankind, to all those who really need it, and it presents it to them in a way that they can thoroughly understand and absorb it. As an aid in the propaganda to enlighten the laity and secure their cooperation in the prevention of preventable diseases this book will serve a very useful purpose.

PUBLIC AND PERSONAL HEALTH. Part one, an elementary text on sanitation—Part two, an elementary physiology and hygiene. By John W. Ritchie, Professor of Biology, College of William and Mary in Virginia, Author of New-World Health Series, and of "Human Physiology" in New-World Science Series, in collaboration with Charles P. Emerson, M.D., Dean of Indiana University School of Medicine; formerly Resident Physician The Johns Hopkins Hospital, and Associate in Medicine, The Johns Hopkins University. Illustrated by Karl Hassmann, Earl Horter, Harry Freeman, Hermann Heyer and Will H. Schanck. Yonkers-on-Hudson, New York. World Book Company, 1916.

The writers who are giving to the public books such as these are rendering the public a great service. The laity must be instructed in matters pertaining to public and personal health more than in any other subject, for nothing in our lives is more important to us than our health. In this book the present day ideas relating to sanitation, hygiene, and physiology are given in such simple and clear language that they can be grasped easily by the layman of ordinary education and intelligence. The problem of the prevention of diseases might be made easier, no doubt, by securing a general distribution of books such as these among the public.

to revise the book thoroughly, to enlarge it, to add a number of new illustrations, and to enhance the value of the work further by the addition of two chapters: one on the "Relation of Acute Infective Processes to Industrial Pursuits," and the other on "Plastic Procedures Instituted for the Correction of Deformities."

It is hardly necessary to remark that this work of Kanavel's is preeminent. An authoritative work such as this ought to be in the hands of every practicing physician who is apt to be called on at any time to treat an infection of the hand. Here he will find just what he may want to know with reference to diagnosis, prognosis, and proper treatment.

DISEASES OF THE SKIN. By Richard L. Sutton, M.D., Professor of Diseases of the Skin, University of Kansas School of Medicine. Former Chairman of the Dermatological Section of the American Medical Association; Dermatologist to the Christian Church Hospital. With 693 illustrations, and 8 colored plates. Cloth, \$6.50. St. Louis, C. V. Mosby Company, 1916.

A really good book on diseases of the skin is always a very welcome addition to medical literature. Physicians already have become impressed with the importance of the study of dermatology in relation to their work, no matter what special branch one may practice. A textbook on skin diseases is, therefore, a book that every practicing physician needs and ought to have.

This new work presents the subject of dermatology in a comprehensive—yet brief and concise—manner. The author is well-known as one of the foremost dermatologists in this country. His reputation in this field of medicine is known to nearly every American physician both by his work and by his many splendid contributions to literature. Surely Dr. Sutton ought to be qualified to speak with authority. Moreover he presents the subject matter in such a way that it makes very interesting reading. In this respect, at least, his book is superior to some of the other books now on the market.

Too much praise for the many excellent illustrations cannot be given. Perhaps in no other specialty are illustrations more important or more necessary than in teaching dermatology. It would be impossible to exaggerate the value that these illustrations add to this work.

It is safe to prophesy that this new book will promptly meet with a wide popularity. It ought to and no doubt will come to be regarded as one of the foremost texts on diseases of the skin to be had at present.

A TEXTBOOK OF PRACTICAL GYNECOLOGY FOR PRACTITIONERS AND STUDENTS. By D. Tod Gilliam, M.D., Emeritus Professor of Gynecology in Ohio State University College of Medicine, and Sometime Professor of Gynecology, Starling Medical College, Gynecologist to St. Anthony and St. Francis Hospitals; Consulting Gynecologist to Park View Sanitarium, Columbus, Ohio, etc., and Earl M. Gilliam, M.D., Professor of Diseases of Women in the Ohio State University, College of Medicine, Columbus, Ohio, etc. Fifth revised edition. Illustrated with 352 engravings, a colored frontispiece, and 13 full-page half-tone plates. Cloth, \$5.00 net: Philadelphia, F. A. Davis Company, 1916.

The purpose of the fifth edition of this well-known work was to bring it fully up to date. The authors state that undesirable matter has been supplanted by

that which is newer and better so that many changes—too numerous to be mentioned in detail—have been made.

The authors have succeeded very well, indeed, in making this a simple, plain and practical sort of work. Each subject is treated briefly and yet fully enough for the average busy practitioner to get the essence with but little effort and no trouble on his part. No wonder the popularity of this book has continued since its first appearance! It is just the sort of book on practical gynecology that is best suited to meet the needs of the average worker.

It can be recommended, also, as an admirable text for students. Students cannot fail to appreciate the value of a textbook in which the subject matter is presented to them so simply, so clearly, and so briefly as it is in this work.

A word of praise for the many really good illustrations must be said. The colored frontispiece is a beautiful work of art, indeed.

This new fifth edition ought to and most certainly will add to the reputation and popularity that this work already enjoys.

A TEXTBOOK OF PATHOLOGY. By William G. MacCallum, M.D., Professor of Pathology in the College of Physicians and Surgeons, Columbia University, New York City. Octavo volume of 1085 pages with 575 original illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, \$7.50 net.

Curiously enough the study of pathology has been neglected by the general man probably more than any other branch of the medical sciences. With the realization of the importance of this one of the basic sciences underlying medicine there seems to be a tendency on the part of all classes of medical men to devote increasing attention to the subject of pathology.

Good English textbooks on pathology have been and are yet rather scarce. Therefore a new standard work on this subject by an author of established reputation is most welcome. Those who are acquainted with this author and his work will take it for granted that the book which he has succeeded in giving to the profession is one worth having, indeed.

In this book in which the author presents in its order and contents the course in pathology given to the medical students of Columbia University he has undertaken to discuss "the general principles of pathology as illustrated by a study of the commoner and more important diseases." His method of presenting the subject is unique and quite original. His conception is based on the idea that all abnormal processes are the result of some form of injury, or of the immediate or more remote reactions of the body to injury. The one great exception is in the case of tumors, the cause of which is not definitely known. Thus the author has planned to discuss disease on the basis of etiology as far as our present knowledge permits. In this respect, at least, it is quite different from all of the older works on pathology.

A great many admirable illustrations have been put in this volume. These are of the greatest help in teaching pathology. Without them a book is inadequate, no matter how good may be the text.

This new book is deserving to be ranked as one of the foremost English textbooks on pathology to be had at present, and is hereby recommended as such to physicians and students.

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THE JOURNAL

OF THE

Indiana State Medical Association

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NUMBER 10

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NEXT ANNUAL SESSION, EVANSVILLE, SEPT. 26, 27 AND 28, 1917.

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ENTERED AS SECOND CLASS MATTER, JANUARY 20, 1908, AT THE POSTOFFICE AT FORT WAYNE, INDIANA, UNDER ACT OF CONGRESS OF MARCH 3, 1879.

Just Off the Press

DISEASES OF CHILDREN

By EDWIN E. GRAHAM, M.D.

Professor of Diseases of Children, Jefferson Medical College, Philadelphia; Pediatricist to the Jefferson Hospital and to the Philadelphia Hospital; Consulting Pediatricist to the Training School for Feeble-Minded, Vineland, N. J.; Member of the American Pediatric Society, etc.

Octavo, 902 pages, with 89 engravings and 4 plates. Cloth \$6.00 net

This new work presents the most modern views upon each subject discussed, and in such a way that they may be immediately available to the busy practitioner as well as perfectly clear to the medical student. In the discussion of treatment no details have been overlooked, and the physician engaged in general practice may find herein the precise management of a typical case of any disease which he is called upon to treat.

Infant Mortality, Heredity, and Environment, which are of great importance from the standpoint of the pediatrician, *Fresh Air in the Treatment of the Healthy and Sick Child*, and *Puberty* have been thoroughly discussed in separate chapters specially devoted to these subjects.

Diseases of the Gastro-Intestinal Tract have been presented in full, and some of the most advanced ideas concerning diagnosis and treatment have been incorporated. *Food Injuries, Chronic Constipation, Pylorospasm*, and *Pyloric Stenosis* have received special consideration, a careful differentiation being made between the two latter affections. A whole chapter is devoted to *Diseases of the Liver*, while *Diseases of the Spleen* are fully discussed, and enlargement of these two organs, a common condition in children, is carefully considered.

In the chapter on *Diseases of the Skin* the aim has been to suggest for the most important skin lesions such therapy as is applicable to children. Particular attention is also called to the articles on *Influenza, Pertussis, Anterior Poliomyelitis*, and *Enlargement of the Thymus Gland*.

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THE INDIANA STATE MEDICAL ASSOCIATION

Next Annual Session, Evansville, September 26, 27 and 28, 1917

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2d—J. B. Maple, Shelburn.....	December 31, 1918	8th—G. W. H. Kemper, Muncie.....	December 31, 1918
3d—Jos. D. Heitger, Bedford.....	December 31, 1919	9th—F. A. Tucker, Noblesville.....	December 31, 1919
4th—W. H. Stemm, North Vernon.....	December 31, 1917	10th—O. B. Nesbit, Gary.....	December 31, 1917
*5th—Joseph H. Weinstein, Terre Haute.....	December 31, 1915	11th—G. G. Eckhart, Marion.....	December 31, 1918
6th—O. J. Gronendyke, Newcastle.....	December 31, 1919	12th—E. E. Morgan, Fort Wayne.....	December 31, 1916
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*No election held in 1915.

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Announcement of Committees for 1917 will be published later

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THE JOURNAL

OF THE

INDIANA STATE MEDICAL ASSOCIATION

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ISSUED MONTHLY under Direction of the Council

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NUMBER 10

ORIGINAL ARTICLES

THE CONTRIBUTION OF ANIMAL EXPERIMENTATION TO INTER- NAL MEDICINE *

HENRY A. CHRISTIAN, M.D.

Hersey Professor of the Theory and Practice of Physic, Harvard
University, Physician-in-Chief, Peter Bent Brigham
Hospital, Boston

BOSTON

Your Committee in inviting me to address the Indiana State Medical Association suggested that I take as a topic the value of animal experimentation to internal medicine. It occurred to me that some idea of the importance of animal experimentation to our daily work in internal medicine might be given by asking you to accompany me on an imaginary morning visit in my medical wards and let me point out as we go about how some of the things we have learned from animal experimentation help in the diagnosis and treatment of the patients we shall see. This visit is imaginary only in the sense that you must imagine yourself joining a group of house-officers, students and nurses as we pass from bed to bed in the quiet, comfortable hospital ward. The visit is such as occurs daily in any well regulated hospital. The patients are real. The diseased conditions I shall describe are such as we should find on almost any day in any large hospital.

In the first bed on the right as we enter the ward lies a rather large framed man with somewhat gaunt features. There is a slight flush to his cheeks. In low tones the house-officer tells us that this man complains of frequent painful urination, with urine sometimes blood tinged, nearly always cloudy. This has persisted for some months. His nights have been of interrupted sleep; in his days he has been incapable

of doing his work, that of a motorman. He is feverish. Gradually he has lost strength. Examination shows a moderate sized mass in his left flank and abundant pus cells in his urine. Cystoscopic examination shows an inflamed bladder and cloudy urine flowing from the left ureter. Roentgen ray reveals an irregular shadow in the region of his left kidney. The diagnosis lies between renal calculus and tuberculosis of the kidney. An animal experiment will decide for us whether or not it is tuberculosis. Some of the urinary sediment is injected into the abdomen of a guinea-pig. After an appropriate interval the guinea-pig is killed and examined for evidence of tuberculosis. There in the guinea-pig's abdominal organs are the unmistakable signs of tuberculosis. The man, our patient, is thus shown to have tuberculosis of his kidney. With the correct diagnosis established by animal experimentation we are in a position to proceed more intelligently with treatment.

What is to be done? First the diseased kidney must be removed provided the other kidney is in good enough condition to function satisfactorily and the patient strong enough to stand the operation. How can we tell whether it is safe to remove the diseased kidney? If we inject a dye stuff, phenolsulphonephthalein, into the patient's back and then measure the amount of coloring matter excreted by each kidney during one or two hours we can form an opinion as to the ability of each kidney to function and so decide whether it would be safe to undertake the removal of the diseased one, thereby throwing all of the excretory work on the remaining kidney. This knowledge of the use of a dye stuff for such a purpose rests primarily on knowledge obtained from animal experiments from which workers learned that this particular dye stuff was excreted through the kidney and not elsewhere and that by the normal kidneys more than 60 per cent. would be excreted in two hours, while if the kidney was damaged this

* Read at a Public Meeting of the Indiana State Medical Association, held at Fort Wayne, Indiana, Sept. 28, 1916.

amount would be decreased in proportion to the degree of the damage. Moreover on animals it was shown that this dye stuff was not a poisonous substance, and so one safe to use on man. Such tests had to be made on animals before we were justified in using such a substance on man.

Having determined from this or similar tests of renal function that the removal of the diseased kidney will leave behind a kidney on the other side capable of adequate function the surgeon will operate. However, he finds that the patient is very anemic from having lost blood from time to time from hemorrhage from his diseased kidney. His pulse is weak and his general condition poor. As he is, it is doubtful whether the patient would survive operation. Can anything be done to improve his condition? Yes. By animal experimentation it has been shown that it is possible to introduce blood into the blood vessels of one animal from another of like kind with safety after it has been shown that the two bloods will mix without the formation of any harmful substances. Furthermore it has been shown that such introduced blood will function just as the animal's original blood. On animals the technic of such an introduction of blood, or transfusion, as we call it, has been worked out until it can be done speedily and safely. Just this method can be applied to our patient. By tests, a normal healthy man will be selected whose blood will mix safely with our patient's. Enough blood will be taken from the normal man to do him no harm and will be introduced into the circulation of our patient. This will restore our patient to quite good condition and the surgeon can proceed safely with his operation. Until animal experimentation taught us the way, such a procedure was not possible and such a patient as ours if operated on without transfusion would have died in all probability. Now, with transfusion at our service, operation becomes safe for him.

In the actual operating the surgeon utilizes a considerable amount of knowledge and skill which has been acquired from animal experimentation. The operation is successfully over. What now? Fresh air, rest, good food. Why? Because the late Doctor Trudeau years ago in the Adirondack wilds took courage in submitting patients with tuberculosis (consumption) to such a treatment since he had observed that rabbits if inoculated with tuberculosis sickened and died if confined in gloomy cages, while they recovered and remained healthy if allowed freedom, fresh air and sunlight. His animal experiments gave him a basis for persisting in the fresh air treatment of his consumptives until

he was able to convince all that herein lay the chief weapon with which to combat the dread white scourge. So for these reasons we give our patients a fresh air rest treatment that the remains of the tuberculous infection outside of the removed kidney may heal and our patient be returned to active work again.

Let us pass now to the next bed. Here propped on pillows lies a stout man with a dusky hue to his face, with suffused eyes, swollen legs and distended abdomen, breathing rapidly and with much difficulty. Our house-officer tells us that during the last six months the man has grown increasingly short of breath, more recently his legs have swollen and then his abdomen. He has become unable to walk about nor can he lie down in comfort. He has lost appetite and recently vomits almost as soon as he eats. His condition is one of great discomfort. Examination shows a weak, rapid, very irregular pulse, an enlarged heart with signs of fluid in both chest and abdomen. From the type of irregularity of the pulse we know that the upper chambers of the heart are beating in an exceedingly rapid, irregular, incomplete way (fibrillating) instead of with a complete regular contraction, and from them are going out stimuli, many of which are too weak and come at too rapid a rate to institute a normal forcible pumping contraction in the lower chambers of the heart. This mechanism of the dependence of one chamber on the other for normal heart action we have learned almost solely from experiments on animals, and the exact way in which our patient's heart is beating in its several parts we have learned by studying heart action in various patients with various types of apparatus yielding graphic records of cardiac activity. So the diagnosis in this particular patient becomes easy; he has a chronically diseased heart muscle with fibrillating auricles and a failing circulation. His condition is very bad; he needs prompt relief. We know that drugs of the digitalis group will block some of these weak, insufficient stimuli going to the main pumping part of the heart and make it beat more slowly and more forcibly, thereby improving the pumping action of the heart. Such a result we wish to obtain promptly for our patient. Under these circumstances we determine to give him a drug of the digitalis group and introduce it directly into his circulation. Past experience and knowledge of the patient's present condition and previous treatment make us feel sure that such a procedure will be safe. We choose to give him strophanthin, one of the digitalis drugs, and introduce it

immediately into his circulation. The preparation which we use has been standardized by using it on cats and from the action of a given amount on the heart of the cat we know how much to inject into our patient. Within an hour his heart action has improved, and by the next day he will be much better. Another form of heart tonic, digitalis, will be given by mouth. Of this drug, too, we have learned much by animal experimentation and so can intelligently use it on our patient. By this treatment in four or five days the swelling will disappear from our patient's legs and abdomen, his color will become natural, his shortness of breath will disappear and he will sleep in comfort. His improvement is likely to continue, depending on how seriously diseased a heart muscle he has, until some subsequent overstrain or infection returns him again to his precarious condition and the necessity for prompt, vigorous repetition of the treatment.

In the adjoining bed lies a young man of eighteen, feverish, on his side, knees drawn up, head thrown slightly backward, and if we attempt to flex his neck he moans in pain. He is stuporous and his head aches. Two days ago he was well. A rapid examination reveals signs indicating that the young man has meningitis, an inflammation of the membranes enveloping the spinal cord and brain. A hollow needle is inserted in his back between two of his lower vertebrae and slowly pushed in until fluid begins to flow through it. This fluid is caught in a sterilized test tube. As it gradually fills the tube it is seen to be slightly turbid. Some of it is placed in a conical tube and centrifuged. At the bottom of the tube a sediment appears. A small portion of this is spread on a glass slide, dried, stained and examined under the microscope. Many pus cells are found. In them are seen small rounded bacteria in pairs. They are found to have certain staining reactions. This with their appearance leads us to the conclusion that they are meningococci and that the patient has a particular form of meningitis, acute cerebro-spinal fever.

Now many experiments on guinea-pigs and monkeys have taught us the relation of these micro-organisms to this disease and have shown that by repeated injections of them into the horse, the serum of the horse can be made to contain immune bodies which when injected back into monkeys will protect them from injections of these bacteria. Based on these animal experiments, properly prepared horse serum was tried on human beings and it was found that by injecting into the spinal canal of man a

proper amount of serum obtained from immunized horses this form of meningitis could be cured. At present such serum is prepared commercially by using horses, again animal experimentation. Such serum we will have injected into our patient's spinal canal and feel pretty sure that it will cure him. Animal experimentation has given us a means of curing three out of every four to six patients with meningococcus meningitis whereas before animals were thus employed the conditions were reversed; i. e., three out of every four to six patients died. Now 75 per cent. get well, whereas before 75 per cent. died. The hopelessness with which I regarded one of these patients in my wards prior to the animal experimentation of Flexner and his associates which resulted in the preparation of an efficacious antimeningitis serum has been changed into hopefulness and cheer for now I can save these patients if I can get them for treatment soon after the disease begins.

But let us suppose that no bacteria of any kind were found among these cells obtained from the turbid fluid that flowed through the hollow needle inserted into the young man's back. Under these circumstances we would have tested the young man's blood and spinal fluid for syphilis by a complicated method involving many principles worked out in part from animal experimentation. Let us say we find the evidence of syphilis. We would then inject into the patient's vein a dose of salvarsan, an arsenic preparation discovered after laborious investigation in the chemical laboratory with the testing out of many arsenic preparations on animals to determine which would kill the infecting organism without injuring the host; a drug which by the way has to be standardized always by testing on animals to prevent our using in man a preparation that would injure him. After an hour we would withdraw from the man's vein some blood, separate from it the serum and after certain manipulations introduce this serum into the patient's spinal canal. Much of our knowledge of this method has been built up from animal experimentation and without animal experimentation this form of treatment of syphilitic diseases would have been impossible. As a result of having used animals we are enabled to cure many patients such as the one I have just described; patients who without these means of diagnosis and treatment would with few exceptions either die or be permanently injured. I have now before my mind the picture of a bright eyed, chubby little boy, the picture of health, whom we had treated in the way just

outlined above and saved from probable death. His laughing, happy face seems recompense enough for the animals used in standardizing the salvarsan we gave him and he with many more of his kind of all ages saved from disability more than justifies the use of the animals which Ehrlich utilized in discovering and perfecting salvarsan.

In the adjoining bed is a patient who does not appear to be sick. However, he has diabetes and excretes in his urine very considerable amounts of glucose. He represents a group of patients who can be treated solely by dietary measures and who without a properly regulated diet ordinarily show a rapid progression in their symptoms, increasing loss of weight and an all too early death. The present form of dietary treatment with starvation days has been due in large part to the researches of Doctor Allen. Doctor Allen's conception of the disease is that it results from a weakness of the pancreatic function. The pancreas is intimately concerned in the utilization by the body of carbohydrate food (starches and sugars). That this is the case has been proved by many physiologic studies conducted on animals all of which involved some form of operative experimentation and without which relatively little could have been known about the very complicated function of this gland. In this condition of weakened function according to Allen's theory, the pancreas is no longer able to metabolize large amounts of carbohydrate food and the amounts ordinarily taken in the average diet are not utilized. The pancreas is overstrained in its efforts to carry out its proper work and being in an already weakened state is still further exhausted by this overwork. Like a tired muscle worn out by strenuous exercise it needs rest and with rest can to a very considerable degree recuperate. Such rest can be obtained for the pancreas by so regulating the diet that no excessive amount of carbohydrate foods are taken into the system. I will not bother you with details of dietary regulations, but suffice it to say that using Allen's conception of the disease great progress has been made recently in perfecting our methods of managing diabetics, and we have many such patients living and working in comfort now that formerly were incapacitated and whose disease was rapidly progressing downward. Allen's ideas in regard to diabetes are based on experimentation. He succeeded by removing portions of the pancreas in producing in dogs a condition identical with diabetes in man and on these dogs he tried out various methods of management until he evolved a plan which gave good results and

which was harmless to dogs. Then was he prepared to apply his theories to the treatment of human beings. Had it not been for the use of dogs, these methods must necessarily have been tried out on man with no knowledge of their probable effect. This might have involved serious, even fatal consequences. How much better to utilize animals first, work out a method which is beneficial and demonstrate its harmlessness to animals before applying it to man.

With Allen's method our patient can be rapidly gotten sugar-free and a diet adapted to his condition with which he can keep himself in good nutrition, fit for work in a way far better than was possible before Allen's animal experiments and clinical applications were made. Furthermore we are able to very materially shorten the time which it is necessary to keep such a patient under observation in the hospital, thereby accomplishing an economic saving for our patient and indirectly for the community by making it possible for more patients to be handled in any given hospital in the same period of time.

A little further along the same ward is a patient with a pasty, puffy face, lethargic, answering questions slowly and with a thickened speech. His eyebrows in large part have fallen out; his hair is coarse and dry, thinned about his temples. His skin is dry and slightly scaling and the subcutaneous tissue feels thickened and leathery. The patient's mentality seems dulled and his memory poor. He sleeps most of the time and when awakened quickly drops off to sleep again. His friends have noticed that this condition has gradually developed during the last year or year and a half.

Animal experimentation has revealed that in the body there is a group of structures called glands of internal secretion. The experimental removal of different ones of these glands profoundly influences the body condition. Among these glands there is one located in the neck just below the Adam's apple. If this is removed or seriously diseased a condition is produced similar to that just described in our patient. This gland is called the thyroid gland and the condition produced by a decrease in its activity is called myxedema. The patient described has myxedema.

Experimenters have shown that if the thyroid gland is partially or completely removed from animals many of the animals succumb. If, however, a portion of the thyroid is implanted elsewhere in the animal these changes do not occur. Similarly in the human being it

was found that the effect of decreased thyroid activity could be prevented by transplants of thyroid or by injections of thyroid substance. Finally it was discovered that by feeding patients with thyroid gland the effects of deficient thyroid activity could be prevented. By such means, largely experimental in character, our knowledge of the thyroid gland has been built up until we are in a position to treat effectively and practically patients suffering from thyroid deficiency. So now if we will give to our patient daily a small amount of dried gland he will be restored to his normal condition and by continuing to take a proper amount of such gland substance will continue in normal health. Animal experimentation in conjunction with clinical observation has furnished us the means of curing this disease, myxedema.

Now I am going to ask you to go to another part of the hospital with me where patients with contagious diseases may be isolated. Here lies a lovely little girl with arm and leg almost completely paralyzed. She has infantile paralysis, the disease which has terrified so many parents during the past summer, especially those with children in and about New York. Here is a disease whose cause and whose pathology and symptomatology we understand pretty well. It can be produced in monkeys and by giving it to monkeys and studying its effects we have acquired a large part of our present knowledge of the disease. We know that if a monkey or human being survive the disease they are immune to subsequent attacks. In monkeys we can protect against an inoculation of infantile paralysis virus by injecting into the spinal canal some blood serum drawn from a monkey which has survived the disease. This principle is being applied now to human cases. Unfortunately up to now our knowledge has remained too meager, our methods too crude to feel that we can combat satisfactorily the ravages of this disease or prevent its spread. Much more study and especially far more animal experimentation are needed on this problem. In other conditions such study has eventually given results that permit us to treat satisfactorily the disease or prevent its spread. In some conditions results have come slowly. This may prove true with infantile paralysis. Animal experimentation seems to be a method likely to aid us greatly in the solution of these problems because already it has given results of very great value. No one I am sure who has children and no one who has ever seen the terrible crippling produced in the little tots who survive the disease would be willing to do anything likely to prevent the discovery of a means for the cure or prevention of

infantile paralysis. If you were to limit animal experimentation you would take from our investigators one of the most promising methods for the study of infantile paralysis, and probably prevent the discovery of a means for curing, or more valuable, a means for preventing the spread of this disease.

I might go on and enumerate other diseases and describe to you how they are closely related to animal experimentation, but those I have described are ample to show that in daily practice we are constantly making direct use of knowledge obtained from animal experimentation or utilizing in diagnosis or treatment the actual animal as a means of testing some drug, or of proving some cause of disease, or of producing some curative serum.

Indirectly animal experimentation by informing us as to the function of body organs has led the internist to have a far better insight into many diseased conditions in which animal experimentation is not used directly in diagnosis or treatment. The methods we now use for example in the diagnosis and treatment of diseases of the stomach and intestine depend finally upon our knowledge of the function of these organs and much of what we know of this was learned from animal experimentation. The same thing is true for diseases of the respiration, kidney diseases, various disorders of metabolism, many cerebral disturbances, etc.

Many diseases still baffle us; with almost all diseases improvements in knowledge or management are needed. Every means of attack on the problems should be utilized. Animal experimentation in the past has been productive of important information and is increasingly needed in the further investigation of disease. Animal experimentation is daily utilized directly in diagnosis and treatment. Cure of many diseases can be attained only as the result of animal experimentation.

To prevent animal experimentation is to seriously retard medical progress and to render impossible the cure of a large number of people young and old. Can anyone be willing to advocate such limitations as might lead to these results? Would you, for example, advocate the abolition of animal experimentation and as a result see your child crippled in activity ever afterward or dead because some cure dependent on animal experimentation was not available by reason of the fact that you had lent support to a movement which had taken away from the medical profession the means of preparing the cure? I think not. This applies in many ways to many diseases occurring at all periods of life from infancy to old age.

THE SUPPRESSION AND CONTROL OF DEGENERACY *

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Light has its cheering and tonic influence, but darkness has its corresponding value. Heat is a stimulant in Nature's laboratory, but cold has an equivalent function. Optimism casts a halo about the present and future, while pessimism is a check to extravagant anticipations and casts a doubt about human endeavors. So today, contrary to my mental habit, I propose a conservative inquiry concerning the future of America and the intimate relation existing between that future and our profession.

We are a boastful people and not without reason. I need not enlarge on our unlimited resources or unbounded wealth, or the fact that the eyes of all nations are turned in the direction of the United States. Admitted that prosperity is our emblem and success our watchword, yet even as our planet has its luminous and midnight phases, so there are omnipresent influences tending toward destruction and the decay of our present civilization. The perpetuity of the republic depends not only on the army and navy and patriotism of our people, but especially and almost completely on the intelligent and united energies of the medical profession.

From 500 years preceding the Christian era until the present century, malaria with its subtle poison prostrated nations, blighted the hopes of their future and finally swept them into oblivion. It would be convincing to trace the history of the Roman empire and the destruction and decay of preceding and succeeding nations. How malarial paralysis seized on the people and passed into eclipse the unfolding energies and advancements in science and art.

Malaria, and the so-called black death or bubonic plague, united their forces, induced the shade of the Dark Ages and postponed the conquest of intelligence and ambition. Admitted that the intuition of Finley, the sacrifice of Reed and the medical acumen of Gorgas resulted in the achievement of the century. Admitted that the bubonic plague is being held in leash; that tuberculosis is subject to perpetual attack—in fact, that medical science has added 6,000,000 years of life to our nation's assets.

But with all its accomplishments, medicine

has another mission, and this is the import of this paper. My topic includes the economics and stability of this country, for the perpetuity of a nation depends on not only the health but the mentality and morals of its people. Mentality and morals depend on brain structure and environment, and as both are somewhat the result of ancestry, they cannot be separately considered.

Heredity and environment are the joint forces that insure eminence to any people or outline in advance absolute decline and extinguishment. "A birth indicates whether a life will be progressive or retrograde, a good citizen or a defective or a criminal." How can the tyranny of one's organization be avoided? The mental and moral are interwoven as in a texture.

In evidence, Dr. Haines of the Ohio Bureau of Research states that there are fifty-eight of blood relation confined in state institutions, and of another group of defectives, 375 are distributed as follows: 15 in jail, 14 in penitentiary, 9 in the infirmary, 9 in children's home, 6 in the workhouse, 2 in industrial homes, 2 in institute for feeble-minded, 23 alcoholics, 60 have court records, one in Boys' Industrial Home, 77 are immoral, 74 criminal, 55 feeble-minded, 12 public women, 7 tubercular, 4 subject to epilepsy, 3 insane and 3 tramps. Mentality of all ranges equivalent to children of 10 years of age. Most are married with large families.

In this country one in every 500 is of feeble mind. In Indiana we have 5,700 feeble-minded; 90 per cent. of this is an inheritance. One tenth only are receiving state care. In normal families the number born on an average is 4; in degenerate families the number is seven and three tenths. What will be the mental caliber of the population in twenty-one years?

There are two self-evident causes at work that are a menace to this nation. Birth of defectives and immigration. As to the former, "a perfect fruit cannot proceed from defective seed." "Susceptibility to a neurotic taint, epilepsy, insanity, hysteria, alcoholism, syphilis and other well-known conditions are transmitted. The ratio of criminals has increased in the United States from 1850 to 1912 from 29 in each 100,000 to 137. In fifteen years murders and homicides have trebled in ratio of population. The antecedents of 252 admittances to the Indiana State Prison show that 69 had tuberculosis, 43 were insane, had epilepsy or were feeble-minded; 61 had syphilis, 10 opium fiends, 69 alcoholics. But you are familiar with

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the results of heredity." "The annual cost in the support of insane, feeble-minded, blind and deaf and 80,000 prisoners and paupers is \$100,000,000 annually."

Dr. Smith, superintendent of the Eastern Indiana Asylum, states that the care of the insane alone in Indiana is \$1,250,000 a year, which is one half the expense for the charities and care of defectives; \$6,600,000 is the present investment in this state alone and still 600 insane unprovided for, or \$720,000 additional expense is a burden on the state.

In the United States there are 20,000,000 children in the public schools—15,000,000 have physical defects. Superintendent Hichman of the Plainfield Reformatory states that 70 per cent. of the 235 boys in the institution are mentally defective. The conditions present in the care of the insane and defective are such that the death rate is lower than in community in general. Public health work has increased the term of life of defectives. It will fail of its mission unless it concerns itself with the question of the propagation of defectives.

This question of increasing degeneracy can alone be controlled except by a general assent to the requirements of eugenic law; \$100,000,000 annually is the price of neglect. Unless preventive measures are put in successful operation to control the increase of defectives, whether it be called eugenics or some less pretentious name, ultimate disintegration of society is more than probable. "Eugenics at present is an assemblage of cold scientific statements *without vitality*." It requires the universal demand of the people to breathe into it the spirit of life and galvanize it to action. To the medical profession must be put the question for solution.

As foreshadowed, an additional menace to the country results from the elasticity of the immigration laws, at present presenting a medical farce. America is the dumping ground for the refuse of Europe. "Of the foreign born, the insane claim 15 per cent. more than a normal proportion. One of every 250 immigrants becomes insane and a charge on the public. Our schools are crowded with defectives. In one state of 317 defectives, 277 are of foreign birth." When the senseless war is ended, on the Eastern Continent will come a tidal wave of immigration that will sweep America, and as if to magnify the evil, the great majority will belong to the class rejected by the army as unfit—physically or mentally below the standard of requirement.

This European war, with its perils, privations and nervous shocks, will set back civilization 100 years, and America, through the rush of immigration, will bear an unequal share of its untoward results. With no check to these evils, what will be the measure of our calamity? If this is the seed to be sown in America, "What will the harvest be?" Self-preservation demands radical amendments to the immigration laws—and absolute enforcement. Both can best be accomplished by a medical man in the cabinet.

The greatest question that confronts humanity today is the consideration of what will reverse the order of events and result in the betterment of the race. A survey of conditions (systematized) should bring about a reversal of the tendency toward deterioration which to the student of statistics is evident. The danger signal here unfolded is not a phantom of the imagination, but a reality. When this war craze has expended its fury and nations have become fragmentary, reason will adapt its theory to new conditions, and then will be the psychologic period for the birth of ideas that will usher a new era and will reverse the current of deterioration that is now sweeping toward national disaster. A real peril is threatening and can only be averted by the activity of men whose minds are focused on the problem and whose training especially fits them for the undertaking.

Suffice it to assert, the remedy lies with the medical profession. Should we act as a unit the result would be enlarging the scope of the Laboratory of Hygiene at Washington. The Public Health Service should be divorced from every public department and from politics. A national department of health should be established with its chief in the cabinet. Then reform of immigration laws would have a scientific basis, instead of commercial, as at present. Every phase of national prosperity, as before stated, depends on the health, intelligence and morals of the citizens. The highest standard of mental and physical vigor is the greatest asset of any people. Medical science must be the beacon light to illuminate this subject, standardize this asset and give promise of advancement and national prosperity.

This thought of a cabinet's position was brought to your notice in a paper I read in 1910, and has received recognition by the President of the American Medical Association. It should be brought before the Association repeatedly, until by repetition it becomes an accomplished fact. The united voices of the members of the

American Medical Association would be irresistible. A cabinet position would unfold a plan of campaign as broad as America and as lasting as time, and would embrace possibilities for the nation's welfare that has been the dream of years.

When President Wilson entered the White House he found this question of a cabinet position for medicine in waiting for his advocacy. He has striven to manage the Mexican muddle, and thus far has steered the ship of State with skill during the war of nations, but in this affair of a cabinet position for medicine and its resultant, a vital issue in this nation, he has turned away his face. This is a matter of regret but not discouragement, for the voice of the people will prevail.

Indiana should take the initiative. Were statistics properly compiled, the public would be amazed. Have our representatives in Congress present this nation's need and their voices be heard until its accomplishment. The people would demand action that the tide of degeneration be stayed and awaken to the fact that medical science was the rock on which to build.

Heretofore medicine has especially interested itself in the control of acute disease and epidemics, and with marvelous results. Now is the time to enlarge its sphere of effort and include control of the abnormal increase of imported defectives in our nation.

A united effort of the medical profession centralized in the cabinet would revolutionize conditions and place in the forefront of advancement OUR OWN AMERICA.

The slogan of all political parties should be that the president appoint a medical man in the cabinet.

DERMATITIS INDUCED BY DRUGGIST

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CINCINNATI

On Feb. 22, 1916, Mrs. D. B., married, aged 40 years, presented herself with a severe papulo-vesicular dermatitis, covering a large area over the left upper arm. (See illustration.) The skin was bright, diffusely red, and showed early evidence of profuse desquamation. The area was studded with small pea-sized vesicles, were in evidence, some of them ruptured and oozing serum. Local temperature was materially increased and patient was greatly distressed by a sense of intense itching and burning, which impaired sleep and disturbed her general com-

fort and peace of mind. The clinical picture was that of a very severe acute, artificial dermatitis, one that had doubtless been recently induced by the application of some severe form of local irritant.

Upon query, patient stated that her husband had stepped into an Indianapolis drug store, and upon request had been sold a remedy, called "Haag's Eczema Cure," which would speedily cure any case of ringworm. This remedy was applied by the patient, upon a supposed patch of ringworm over the left upper arm. The application was immediately followed by an intense dermatitis, accompanied with such severe subjective and objective symptoms, that the patient was compelled to seek prompt professional relief.



Dermatitis of papulo-vesicular nature, caused by the single application of "Haag's Eczema Cure."

The remedy which caused the dermatitis is a clear, colorless preparation, odorless, with a slight salty taste. It forms a yellowish flocculent precipitate with silver nitrate solution; it effervesces with hydrochloric acid; remains unchanged in appearance when mixed with bichlorid and iodid of potash solutions. It is labeled "Poison—Caution. Haag's Eczema Cure is not a patent medicine. It is a compound of new chemicals for the quick cure of dry or scaly eczema, tetter, ringworm and all blotches of the skin. Directions—Apply the cure with the finger or cork to the affected part night and morning until it becomes sore to the touch; then quit its use and apply any soothing salve. When the soreness appears, it is a sign that all the parasites and diseased skin have been destroyed, and a healthy sore produced which will quickly heal by the application of any healing salve. Where the patient has impure blood or scrofula,

Haag's Blood Purifier should be given at the same time. The ingredients are so expensive it cannot be sold for less than \$1.00 per bottle in any quantity. Sold by druggists, or sent, on receipt of price, to any address by Julius A. Haag, Mfg. Chemist, Indianapolis, Ind., U. S. A."

The indiscriminate sale and use of a remedy of this character is not without danger and deleterious effect. It is a flagrant example of promiscuous, indiscriminate and illegitimate prescribing at the hands of careless and unscrupulous druggists. The incongruous mis-statement on the label is in and of itself sufficient to condemn the preparation for the purposes for which it is sold. It is probably not a compound of *new* chemicals. It is surely not "a quick cure" for many cases of "dry or scaly eczema, tetter, ringworm and all blotches of the skin." The generic term "blotches of the skin" embraces almost every form of dermatosis, and is such a palpable mis-statement and misrepresentation on the face of it, to require no further comment.

Furthermore this commercialized product does not meet with the well-recognized requirements of the Pure Food and Drug Act. With these shortcomings in mind, the following letter was addressed to Mr. Julius Haag:

CINCINNATI, Feb. 26, 1916.

My dear Mr. Haag: A patient of mine by the name of B— informs me that her husband entered your drug store recently and asked for a remedy to cure ringworm. You gave him a preparation called "Haag's Eczema Cure." The application of this remedy was followed by a very severe inflammation of the skin. I desire to learn what explanation you can offer in the given case.

Do you make a practice of prescribing for patients? Furthermore, do you sell this remedy, which you represent to be "a compound of *new* chemicals for the *quick* cure of dry and scaly eczema, ringworm and all blotches of the skin," for the above affections, and if so, do you comply with the requirements of the Pure Food and Drugs Act? These appear to be remissions which bear careful investigation and scrutiny at the hands of the medical profession. I therefore await your prompt and early reply.

Very sincerely,

(Signed) M. L. HEIDINGSFELD.

The courtesy of a prompt reply not forthcoming, the writer, out of deference to the profession and their responsibility to the laity, has felt it his unpleasant duty to give the matter its proper degree of publicity. He furthermore believes that instances of this kind (and their occurrence is by no means of an infrequent nature) should be brought, whenever possible, to the attention of the profession, and measures devised to counteract their baleful influences.

19 West Seventh Street.

STATE JOURNALS

WE cannot desist congratulating the Indiana and Ohio doctors on their having such splendid publications and their good fortune and foresight in selecting such capable editors. There are a goodly number of excellent state journals, but these two represent and reflect a progressive profession and keen, businesslike and commanding editors. We bow again in respect and admiration.—*Journal Michigan State Medical Society.*

We very much appreciate this compliment, as also the compliment of the Executive Secretary of the Ohio State Medical Society, who, in addressing the House of Delegates at the Fort Wayne Session of the Indiana State Medical Association, began his remarks by saying that the Indiana medical profession should be proud of its Journal, for he considered it the best state medical journal published. However, we realize that it is necessary to "go some" in order to compete with the state journals of Michigan and Ohio on the question of general excellence, and, while we are on this subject, it is entirely proper to call attention to the fact that nearly all of the state journals have been wonderfully improved during the last few years and are splendid examples of clean and progressive medical journalism. California, Texas, Missouri and New York publish state journals that do credit to their respective state medical associations, and the journals of Tennessee, Iowa, Georgia, Florida, Nebraska and Pennsylvania are showing striking improvement within the past year. What the future holds forth will be governed by the ability and enterprise of the editors, though, to no little extent, upon the expense of publication. The enormous increase in the cost of paper and printing which has occurred during the last two years has been a serious handicap to many publications, and nearly all of the state journals have been hard hit, with a few of them encountering large deficits last year, and doomed to encounter still larger deficits at the end of this year. We believe, however, that the doctors of the country should appreciate conditions and be willing to meet them by paying such an increase in the subscription rates for their reading material as becomes necessary in order to meet the increased cost of publication.

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EDITORIALS

SIMPLE MEASURES FOR DETERMINING RENAL FUNCTION

Renal function is quite a complicated process. The kidney eliminates the substances that the body does not want, and all substances that act on the body in a toxic or injurious way. When the functional activity of the kidney becomes impaired its ability to excrete some of these substances becomes diminished in proportion to the degree of impairment of renal function. The power of the kidney to eliminate the various kinds of substances must vary according to the part of the kidney structure which is diseased and the extent of the disease process. The kidney may be able to eliminate certain products and not others, or vice versa. An exact study of renal function would, therefore, involve a determination of the ability of the kidney to eliminate each and every one of its known excretory products. For practical clinical purposes, however, no such laborious study is necessary. The busy general physician may determine the degree of renal function for himself by a few simple observations that can be carried out very easily.

The total amount of urine passed and its specific gravity may serve as a valuable index of kidney function. Persistent polyuria associated with a low specific gravity—the so-called hyposthenuria—indicates impaired function. Upon these physical factors is based the new so-called “test meal for kidney function,” originated by Mosenthal, of the Johns Hopkins Clinic. With the patient on ordinary full diet his urine, collected every two hours during the day and over a period of ten or twelve hours at night, shows a “fixation of the specific gravity.” This has been found to be one of the earliest indications of impairment of kidney function. The simplicity of this test and the ease with which it can be carried out by anyone, no matter how busy he may be, is quite obvious.

The estimation of the degree of renal func-

tion by means of phenolsulphonephthalein already has become immensely popular, and is being used by practically every progressive physician. The substance is supplied to the physician in sealed sterile ampules ready for use at any time. One cubic centimeter of this material is used. It is injected deep into the lumbar muscles. One hour and ten minutes later the patient voids and all the urine in this specimen is saved. One hour later the patient is made to void again, and all of this urine also is saved. Each specimen is then made strongly alkaline, and the percentage of phenolsulphonephthalein excreted by the kidney in the two hours is then determined by comparing each specimen with a colorimetric scale. The percentage obtained represents the degree of functional capacity of the kidneys. On the whole this test of renal function has been found in a very extensive experience to be very reliable, and the information obtained from it to be very helpful both in diagnosis and prognosis. Occasionally the test has been found to fail, but such failures may be regarded only as the exceptions that prove the general rule. Certainly this test is very simple. It is so simple and so easily carried out that there can be no really good excuse why every practitioner should not acquaint himself with it and make use of it in his work.

The physician must begin to realize that he has not done his duty if he has not made any further study of his patient other than determining the specific gravity of the urine and testing for albumin and sugar. Renal function often is impaired without there being striking abnormalities in the urine. In practically every case, especially those which are suggestive or suspicious, the state of kidney efficiency ought to be studied quite thoroughly. A complete study of the urine and an estimation of the degree of renal function must be made. When such an investigation is made the attending physician obtains information as to the clinical condition of his patient which will be of the greatest value to him in his diagnosis, prognosis, and treatment.

ANTITYPHOID VACCINATION

Some very interesting things with reference to antityphoid vaccination have come out during the present European war.

Of those persons developing typhoid fever 87.8 per cent. had never been vaccinated. Of those persons developing typhoid who had been vaccinated 50 per cent. had received only one

dose. Only 3 per cent. of those vaccinated three times contracted typhoid. Of those persons developing infection with *Bacillus paratyphoid* B. 10 per cent. had never been vaccinated with typhoid bacilli; 50 per cent. had received one dose, 90.5 per cent. two doses and 91.5 per cent. three doses. Thus it would seem that three doses of antityphoid vaccine prevents 97 per cent. of typhoid cases but favors the developments of *Bacillus paratyphoid* A or B infections.

A large percentage of typhoid cases prevented are replaced by paratyphoid infections. It is now believed that most cases of typhoid are really mixed infections and that antityphoid vaccinations prevent the development of typhoid but not of paratyphoid.

A most interesting situation closer to home is the development of paratyphoid among the soldiers in Texas who had received only the antityphoid vaccine.

Most cases of so-called ptomaine poisoning are really due to the *Bacillus paratyphoid*, so that mixed vaccine protects against a much greater number of the types of infection than does antityphoid alone.

THE FORT WAYNE SESSION

The 1916 annual session of the Indiana State Medical Association, held in Fort Wayne last month, was especially noteworthy for two reasons. First, the high character of the scientific papers and discussions presented; and, second, the celerity with which a large amount of business was transacted by the House of Delegates, including the adoption of a plan for the employment of an all-time executive secretary to look after the various interests of the Association. An amendment to the Constitution, raising the annual dues of the Association to \$4.00 to meet the expenses of this plan, was adopted.

The scientific papers were of a high order, and reflected great credit upon the essayists and upon the Program Committee who made a wise selection of the varied subjects. Especially noteworthy was the illustrated paper on Bone Tumor by Doctor Joseph C. Bloodgood, of Baltimore, which was listened to by a packed house and duly appreciated. The Scientific Exhibit was an educational feature which merited the attention and commendation which it received from a large number of members who visited it.

The evening meeting at the Majestic Theater, to which the public was invited, was addressed by Dr. Henry A. Christian, of Boston, his subject being "The Contribution of Animal Experi-

mentation to Medicine"; and Dr. Joseph C. Bloodgood, of Baltimore, whose subject was "The Cancer Problem." This meeting was well attended, though it was noticeable that the laity was not represented as much as it should have been, considering the character of the program and the extensive advertising in the lay papers which the meeting was given. The musical program, of exceptional merit, in itself was a drawing card and added much to the entertainment of the evening, though the addresses were most instructive and worthy the attention of all thoughtful persons. This effort to disseminate trustworthy information to the public on medical activities and accomplishments is deserving of further encouragement.

The movement to secure an executive secretary for the Association is one that should merit the approval of every member of the Association. What the Ohio State Medical Association is accomplishing for its members by having an executive secretary, or business manager, can be accomplished by our Association, and everyone will admit that there is much to be desired in the way of improved conditions for the Indiana doctor.

The election of officers was attended by no contests, and resulted in honoring the deserving members of the Association. Likewise, the selection of Evansville as the next place of meeting proved popular.

The session adjourned after voting the Fort Wayne Medical Society and the citizens of Fort Wayne a rising vote of thanks for what was termed "splendid hospitality."

THE EXECUTIVE SECRETARY

A NEW DEPARTURE FOR THE ASSOCIATION

Those who heard the several talks by Mr. Sheridan, the capable and energetic executive secretary of the Ohio State Medical Association, at the Fort Wayne Session, were impressed with not only the importance but the necessity of conducting the affairs of the organized medical profession on business principles in order to secure the most and the best in the interest of medical men.

Mr. Sheridan is not a doctor, but formerly was engaged in newspaper work. He possesses an exceptional amount of aggressiveness, executive ability, and good business sense. Through him, as virtual business manager, the Ohio doctors have secured more and better legislation to protect the varied interests and privileges of the medical profession, to promote medical edu-

cation and public health, and to encourage legitimate and reputable conduct of medical practice, than ever has been accomplished before.

As was stated by Mr. Sheridan, every one takes a "swat" at the medical profession, and they "get away with it" because no organized and effective opposition is offered. If present conditions, with a tendency to grow worse, continue, it will not be ten years before it will be absolutely impossible for an educated and ethical doctor to make a decent living, and medical education and public health will be at the mercy of ignorant pretenders and unscrupulous politicians.

The average doctor is a poor business man, and altogether too often takes pride in that fact. He is interested in scientific medicine, but he entirely overlooks the very important features pertaining to the business side of the practice of medicine, as he also takes little interest in public or legislative questions which directly or indirectly affect his welfare or that phase of public welfare for which he is most capable of acting as adviser. He imagines that he is contributing his mite to organization when he pays dues to a medical society, attends medical meetings, and subscribes to a lot of fine sounding resolutions which are absolutely worthless so far as accomplishing results is concerned. When he is asked to get out and do some real work, often in his own behalf, he makes the fatuitous plea that he is too busy, or he tries to delegate the work to some one else who in turn does not do it. If, perchance, he does get out to assist in arousing public or legislative interest for or against something which influences his own welfare or the welfare of the public, he wastes his energies because he has no one with a good executive head and keen business acumen to guide him and make his work effective. In other words, he divorces himself from the purely practical and business side of every question, and just to that extent does he injure his own usefulness to himself and to the community. It is well, therefore, if he can be persuaded to accept the services of those who can supply for him that in which he is deficient, and the executive secretary, or business manager, fills the gap.

Why shouldn't medical organizations have a business office and a business head? Every other organization worth mentioning is conducted on business principles and has paid agents, and appropriates money to be used in furthering the interests of the organization and its members. No constructive work or destructive legislation escapes their active considera-

tion, and approval or disapproval means something when it carries with it the influence of the individual membership of any large organization. As showing what the effect of organization can accomplish, witness the successful forcing of the United States Government by the labor unions into the passage of the eight-hour law; what organized effort and a paid management has accomplished for the Christian Scientists in New York State; and note what has been accomplished by the optometrists, osteopaths, chiropractors, and numerous other cults through organization, and money judiciously expended in an educational propaganda. There isn't a member of any one of these organizations that has not contributed freely of his time and his money to secure legislation and privileges favorable to such organizations, and the results loudly testify as to the wisdom of the expenditures. What the regular medical profession, with its thousands of members, has spent in similar efforts to secure legislation and privileges favorable to the profession and the public as well is a mere pittance compared to what has been spent by these non-medical cults. It is therefore high time that the average medical man is awakened from his lethargy. There are a great many questions which deserve and should have the earnest consideration of medical men, and their influence in adjustment. Among these may be mentioned provisions for regulating medical practice, appropriations for medical education, laws governing or controlling the sale and use of drugs, rules governing medical fees in the Workman's Compensation Act, laws relating to the all-time health officers and the public health, animal experimentation, quarantines, care of mental defectives, and many other questions of like nature.

Having been brought to recognize the necessity of appropriate action, the Indiana State Medical Association, at the Fort Wayne or 1916 session, has decided to employ an executive secretary or business agent, whose whole time shall be spent in looking after the affairs of the Association, and the interest of its members, and who shall have an office at Indianapolis. Already an appropriation has been made to cover the expenses of such a feature, and a committee has been appointed to look after the details of the undertaking. The success of the venture is assured if a capable and energetic secretary can be secured, and if the affairs entrusted to him are managed in an economical, efficient, and above all, in an upright and honorable manner. To our notion it is not necessary, and, for many reasons, it is not desirable to secure a medical

man for the new office, though it goes without saying that the man selected should be in sympathy with the aims and objects of the medical profession, and he should possess an abundance of aggressiveness and executive ability.

The Association has decided to raise the dues to \$4.00 per year, though it is a great pity that the dues were not made \$5.00 right in the beginning, for that amount is not more than will be found necessary in the near future to carry out the program planned. Furthermore, it is perfectly ridiculous for any doctor to object to the payment of \$5.00 per year for the numerous benefits which such an expenditure brings to him. The average doctor's cigar bill is more than that for one week. As a starter, though, \$4.00 will accomplish much, and if wisely expended will demonstrate to the membership how much can be accomplished by judicious management.

The importance of inaugurating this new feature at once is apparent in view of the coming session of the Indiana State Legislature, and the necessity of bringing influence to bear upon proposed legislation that is of interest to the medical profession. Further reason for prompt action is the desirability of using the executive secretary in stirring up activity in the county and district medical societies to the end that such societies may properly and efficiently fulfil their functions.

It is expected that this new move on the part of the Association will not only receive the heartiest approval on the part of the individual members, but that it will lead to greater support of the various activities in which the profession is interested.

FEE SPLITTERS ORGANIZE

Driven from the ranks of medical organization as represented by the American Medical Association and its constituent associations, the fee splitters and rebaters in medicine have finally launched an organization of their own, according to the statements in a letter from the treasurer of the new society. The letter reads:

Dear Doctor:

Naturally, men are either conservative or progressive—there are always two parties in almost everything. The American Medical Association represents the conservatives; heretofore the progressives have had no great national organization.

We—the majority of the medical profession—who believe in division of fees (i. e., that the surgeon should not "hog" the whole of a patient's money and leave nothing for the family doctor), are no longer welcome in the A. M. A. We are therefore organizing the Medical Society of the United States, which will not be conducted for the benefit of a few selfish egotists. We would like to have you with us.

It costs only \$1 to join us. This covers dues for 1916 and includes expense for the beautiful certificate of membership (suitable for framing), which you will receive on admission. Fill enclosed blank and return to me with \$1.

Cordially yours,

EMORY LANPHEAR.

P. S.—Membership in your local society is NOT obligatory. On the line "Recommended by" put the names of two doctors (preferably of your neighborhood), who will vouch for you.

It is meet that the headquarters of the fee splitters' organization should be located in St. Louis, where dwells their advocate-in-chief; where also dwells the headquarters of a virile, watchful medical organization whose objects and purposes are unalterably opposed to fee splitting and whose duty it is, therefore, to direct the attention of physicians and the public to the sinister influence of the fee splitter. The officers of the new society are:

President, A. H. Ohmann-Dumesnil, St. Louis.

Secretary, George Howard Thompson, St. Louis.

Treasurer, Emory Lanphear, St. Louis.

Vice Presidents, CARL KELLER, Honolulu; Nobel Younkin, Frankfort, Ind.; Oscar J. Fullerton, Waterloo, Iowa; WILLIAM F. WAUGH, Muskegon, Mich.; BRUNO J. F. GETZLAFF, Sutton, Neb.; GEORGE L. SERVOS, Reno, Nev.; J. N. PYLE, Mineral Wells, Tex.; C. A. Bryce, Richmond, Va.; Josef Francois Replogle, Dubois, Wyo.

Among the contributors to the program we note the following:

W. FRANKLIN COLEMAN, Chicago; R. HARVEY COOK, Oxford, Ohio; W. A. NEWMAN DORLAND, Chicago; CHARLES J. DRUECK, Chicago; WILLIAM S. GOTTHEIL, New York City; WINFIELD S. HALL, Chicago; EVAN O'NEILL KANE, Kane, Pa.; THOMAS H. KELLEY, Chicago; J. C. TRITCH, Findlay, Ohio; CARL B. WAGNER, Chicago.

The names in capitals in the above lists are members of constituent state associations of the A. M. A., and those with the symbol opposite their names are Fellows of the A. M. A. What explanation can they give for permitting themselves to be implicated in a scheme to destroy the usefulness of their state associations and of the American Medical Association? What kind of loyalty do they exhibit to the organization that they have pledged themselves to support? What sort of principles govern them in joining or supporting an organization avowedly opposed to the organic law and the principles of conduct governing the American Medical Association, without first severing their membership in the latter body?

The tree is known by its fruit, and a man is known by the company he keeps.

That the little matter of a state law prohibiting fee splitting does not bother the organizers of the Medical Society of the United States is demonstrated by the fact that invitations to join the society have been mailed to selected lists of physicians in those states that have statutes against the nefarious practice.

We are somewhat curious to learn how many members of the Missouri State Medical Association will fly to the ranks of the fee splitters, now that the mustering bugle has been sounded and the recruiting office opened. None of our members has as yet been published among "those present" in the new

organization, but we are quite sure that the Association will quickly accept the resignation of anyone who desires to affiliate with the Medical Society of the United States and The Journal will give proper publicity to the event.—*The Journal of the Missouri State Medical Association*, September, 1916.

We are under the impression that fee splitting is on the wane, and our reason for so believing is because the public is placing its seal of disapproval upon that practice. The day is coming when the fee splitter will have tough sledding, but for the present it is just as well to separate the sheep from the goats, and the fee splitters are welcome to the notoriety they will obtain by banding themselves into a national organization. We do not believe that there are any considerable number of Indiana doctors who will have the nerve to become identified with the fee splitters' society, but if so, they have no moral right to expect respectful consideration from the medical societies that stand for decency, and if there are any members of the Indiana State Medical Association—which association has gone on record as opposed to fee splitting—who are desirous of joining the new organization, fathered by Emory Lanphear and others of his kind, the resignation of such men from our county and state organizations should be welcomed.

In connection with the organization of the fee splitters' society it may be well to call attention to the fact that, true to form, the prime movers apparently are practicing a little deception in order to secure support and increased membership. Dr. J. C. Tritch, of Findlay, Ohio, publicly announces that he received a personal letter from Doctor Lanphear stating that there was being organized "The Medical Society of the United States," and asking him (Dr. Tritch) to write a paper for the meeting, and to become a member of the society, by paying \$1.00. Dr. Tritch says there was nothing in the literature to intimate that the organization was headed by a band of fee splitters, or was organized to uphold fee splitting, and he promptly announces that fee splitting is something he never practices, does not believe in, and will not advocate. Dr. W. A. Newman Dorland, of Chicago, publicly announces that had he been aware that the fundamental object of the Society, before which he promised to present a paper, was a promotion of fee splitting he would have immediately declined to present a paper, and for the reason that he is strongly opposed to fee splitting, which he considers an unjust and unethical procedure. Dr. Evan O'Neill Kane, of Kane, Pa., publicly announces that

his eyes have been opened to the ingenious trap laid for him, and he gives publicity to a letter to Dr. Lanphear in which he demands immediate withdrawal of his name from membership in the fee splitters' society, and removal of his name from the program of the coming meeting of such society. He announces that he is radically opposed to what he calls the contemptible practice of fee splitting, and he emphatically condemns the practice and all of the methods by which it is conducted.

It would seem, therefore, that some of the leading fee splitters, in their efforts to obtain supporters and recognition of their pernicious practice, are getting the kind of a set back that they deserve. But there is no reason why the fee splitters should not organize, and if their cause is a just one, they should publicly advocate it and defend it. Everything succeeds or fails upon its merits. And if fee splitting is honorable and fair, it will stand the light of publicity, and those who believe in it should be willing to come out boldly in its defense. There should be no quivering or hedging.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

JUDGING from expressions made by visitors, and received by mail since the session, it is very evident that the Fort Wayne session of the Association was not only profitable but enjoyable to all those who attended.

IN adopting the Ohio plan of having an executive secretary or business manager, our Association starts out with more improved conditions than existed in Ohio when they made the change, for we have a better organization to start with, a well conducted medical defense in operation, and a journal established on right principles which can be a wonderful aid in furthering the work contemplated.

NOT a few Indiana doctors take a mid-winter vacation and go to Florida in order to enjoy the warm sunshine and balmy air of that winter resort. We hope that those doctors who contemplate going to Florida this winter will remember that some of the railroads catering to Florida business are advertising in *THE JOURNAL*. You can do us a favor by mentioning *THE JOURNAL* when you write for folders and other information concerning your Florida vacation trip.

YE GODS! To think that it is necessary to remind Indiana doctors to pay no money to agents, and yet, in spite of all the warnings, a smooth faker, representing himself to be the agent of D. Appleton & Company, Publishers, is able to collect money from doctors without giving anything in return except a promise to deliver books—that, of course, are never delivered. Truly, the old saying “A sucker is born every minute” should be changed to read “a sucker is born every minute and he generally turns out to be a doctor.”

WITH food, clothing, drugs, surgical instruments, and absolutely everything used by the doctor costing much more than ever before, is it any wonder that the average doctor who is working for the same old price complains about the difficulty in making both ends meet? There are some Indiana doctors that still are making ridiculously low charges for their services. There isn't any other class of workers that have not advanced fees or wages to conform to present day conditions. Another reason for an executive secretary who can stimulate a little back-bone in individual members of the profession!

IN connection with the move on the part of our Association to have an executive secretary, and that one of his duties is to look after pending legislation that is inimical to interests of the medical profession, it may be well to remind the regular doctors of Indiana that the chiropractors are reported to have a “slush” fund of \$10,000 for use in paying the expenses of those who are attempting to influence legislation in behalf of the chiropractors, and it also is reported that the chiropractors are contemplating a \$100 assessment against every chiropractor in the state for the purpose of securing legal recognition of the chiropractor. This should make the average member of the Indiana State Medical Association who objects to any raise in the Association dues ashamed of himself.

THE Christian Scientists of an eastern state are discussing the advisability of spending \$100,000 for a sanitarium “for those who think they are sick.” To use a slang phrase, “wouldn't that jar you?” We wonder if the Christian Scientist who is struck by a good dose of typhoid infection, or something equally as patent in producing what we recognize as disease, considers his indisposition imaginary. We really wonder why a Christian Scientist carries an umbrella, for there is no reason why he should get wet or even imagine that he is wet or uncomfortable if he fails to protect himself from the inclemency of the weather.

THE Educational Committee of the Medical Department of the Indiana University announces that clinics will be held on Friday of each week, from 10:00 a. m. to 3:00 p. m., at the Robert W. Long Hospital, Indianapolis, to which the physicians of Indiana are invited. The program will be varied, and there will be an opportunity for practical work granted the twelve, or perhaps sixteen, who apply first for the privilege of taking part in the clinic. Those who are interested are advised to write the Educational Committee, in care of the Indiana University Medical School, Indianapolis, Ind.

ALONG with the high cost of living comes an increase in the cost of publishing all periodicals. Our readers may not know it, but the cost of publishing *THE JOURNAL* has practically doubled during the last few months. In order to avoid a deficit at the end of the year, we are compelled to abandon some progressive features contemplated, including an increase in the number of reading pages. When the members of the Association realize that their journal costs them less per member than the members of any other state medical societies pay for their medical journals, the reason for exercising economy in this period of high prices for paper and printing will become apparent.

WE believe that every friend of the Indiana State Medical Association should raise his voice in the interest of \$5.00 dues instead of \$4.00 as contemplated by the amendment to the Constitution offered at the Fort Wayne session. There is an old saying that “money makes the mare go,” and it is equally true that the organized medical profession of Indiana can accomplish something for its own good, and in a perfectly honorable and legitimate way, if it is willing to spend a little money in necessary expenses to accomplish the desired results. And what is

\$5.00 per year to any doctor worthy of the name! It does not equal the amount spent in any one week for luxuries that give no permanent benefit.

"PATRONIZE our advertisers because they help to give you a better Journal," has been our slogan, but sometimes it falls on deaf ears, in testimony whereof we have the complaint of certain members of the Indiana State Medical Association who have been beautifully swindled by a physicians' supply house. Be kind enough to remember, dear Reader, that we regularly refuse the advertising of firms whom we know to be untrustworthy in every sense, but who are anxious to secure business from Indiana doctors, and do secure some business from those who never investigate before they spend their money. When you patronize the advertisers in THE JOURNAL you are patronizing responsible and reputable firms. Whenever we can satisfy ourselves that any advertiser in THE JOURNAL is not treating doctors fairly, that minute his advertising is taken out of THE JOURNAL.

DEATHS

OLIVER L. HUDSON, M.D., died September 22 at his home in Princeton, aged 83 years.

CHARLES P. DUTCHESS, M.D., of Walton, died September 18, after an illness of several months.

CLAIRE A. TAYLOR, M.D., died at her home in Peru September 22, after a brief illness. She was a native of France.

CHARLES R. ARMSTRONG, M.D., 43 years old, of Thornton, died in St. Elizabeth Hospital, LaFayette, September 22, following an operation for appendicitis.

J. ELMER SAALMAN, M.D., of Branchville, died August 24, aged 36 years. Dr. Saalman formerly was a practicing physician of Indianapolis, but several years ago was afflicted with tuberculosis, and since then had spent much time in the West.

BISHOP A. ROSE, M.D., died at his home in Linton on September 25, aged 67 years. Dr. Rose was born at Nashville, Brown County, in 1849, attended common schools, graduated from old Asbury College, studied medicine at Louisville (Ky.) University and the Ohio Medical College, graduating from the latter in 1875.

He immediately began the practice of medicine at Lyons, and has continued to practice in this county ever since, keeping abreast of modern medicine by post-graduate work. He was a member of the Indiana State Medical Association, and was, at the time of his death, dean of his local medical society.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

GENERAL

DR. S. M. VORIS, of Columbus, has been spending the summer with his daughters in Duluth, Minn.

DR. ERNEST V. SMITH, formerly of Rochester, Minn., has located at Indianapolis for the practice of surgery.

THE AMERICAN MEDICAL ASSOCIATION now has a membership of 78,301, being a gain of 2,300 for the last year.

THE Good Samaritan Hospital at Vincennes is to be enlarged by the addition of a new wing containing sixteen rooms.

DR. W. H. BUTLER, of Columbus, spent a few days of September with his daughter, the wife of Dr. Hays, at Richmond.

DR. F. C. DIELMAN, of Fulton, has been appointed physician and surgeon for the C. & O. Railroad for the Fulton District.

DR. E. H. BRUBAKER, of Indianapolis, was married September 7 to Mrs. Ella Runyan. They are at home at 2316 Broadway.

ANY bright, energetic young doctor desiring a location should write THE JOURNAL and receive information of interest to him.

DR. WILLIAM S. CONNETT, formerly of Fort Wayne, was killed in an automobile accident near Raton, New Mexico, September 17.

DR. E. WILLIS ANDREWS has been appointed to succeed the late Dr. John B. Murphy as chief of staff and surgeon in chief of Mercy Hospital, Chicago.

DR. J. K. HAWES and family, of Columbus, have been spending the summer and fall at their cottage on Flatrock, near Columbus.

DR. B. FITZPATRICK, of Columbus, met with a painful accident last week, breaking the radius in his right arm while cranking his machine.

THE Battle Creek Sanitarium held its Golden Jubilee Celebration Oct. 3, 4 and 5, 1916, and had for its guests many eminent physicians.

THE annual convention of the National Association of Retail Druggists was held at the Claypool Hotel, Indianapolis, September 21 and 22.

DR. HERMAN W. SMELSER, recent graduate from the Medical Department of Indiana University, has located at Connersville for practice.

THE White-Haines Optical Company of Columbus, Ohio, have opened a branch office at Indianapolis, and are advertising in THE JOURNAL.

DR. J. F. CRISWELL, of Churubusco, recently underwent an operation at Lutheran Hospital, Fort Wayne. He has made a satisfactory recovery.

THE American College of Surgeons will hold its Fifth Convocation at Philadelphia on the evening of October 27, at the Bellevue-Stratford.

DR. JESSE B. HARVEY, former Indianapolis physician, died in Los Angeles, California, September 14, where he had gone ten years ago for his health.

DR. J. H. F. PRENTISS, of Gary, has retired from active practice and purchased an orange farm in Eustis, Lake County, Florida, where he will reside.

DR. GEORGE WILSON, who has recently finished his medical course at St. Louis, has located at Evansville, Indiana, as assistant to Dr. Carl Viehe.

SIR THOMAS LAUDER BRUNTON, of London, 72 years of age, widely known as a writer on medical subjects, especially therapeutics, died September 16.

CLAY COUNTY MEDICAL SOCIETY met at Davis Hotel, Brazil, September 22, with a good attendance. Dr. L. C. Rentschler of Center Point presented the principal paper.

BUDD E. VAN SWERINGEN, JR., son of Dr. and Mrs. Budd Van Sweringen of Fort Wayne, died at the family home September 10 from tuberculosis. He was 26 years of age.

DR. WILLIAM H. DAVIS, formerly vital statistician of the Boston Health Department, has been appointed chief statistician, division of vital statistics, United States Bureau of the Census.

THE Whitley County Medical Society met in regular session at Churubusco on September 19, and held a very profitable meeting. Dr. J. H. Briggs entertained the members at a chicken dinner at noon.

DR. S. P. HOFFMAN, of Decatur, was appointed by Governor Ralston as delegate from Indiana to the Mississippi Valley Conference on Tuberculosis which met in Louisville, Ky., October 4, 5 and 6.

DR. WM. T. CARMICHAEL, Walesboro, in crossing a ravine while on his way to see a patient, September 18, fell and broke his left leg. The doctor, although 72 years of age, is improving nicely.

DR. C. O. McCORMICK has opened an office at the corner of Central Avenue and 32d Street, Indianapolis. He graduated from Harvard Medical College in 1913, and spent two years in the Boston hospitals.

DR. S. L. EGART, for five years connected with the Indianapolis City Hospital is now associated with Drs. Walker, Welborn, W. R. Davidson, and C. L. Seitz, of the Walker Hospital, Evansville, as Roentgenologist.

DR. J. S. SPROWL, of Warren, has been very critically ill, following several strokes of paralysis. His sons, Dr. Raymond Sprowl, of New York City, and Dr. Fred Sprowl, of Spokane, Washington, have been at his bedside.

PLANS are under foot to raise half a million dollars for the erection in Chicago of a memorial to the late Dr. John B. Murphy. It is probable that the memorial will take the form of an institution for surgical research.

THE Hamilton County Medical Society held an interesting meeting at Carmel in September, with Dr. R. A. Cooper as host. Drs. Brayton, Humes, McCowan, McCaskey and Link, of Indianapolis, were honor guests.

DR. EDWIN WALKER, of Evansville, who has been suffering from rheumatism since last February, and who has been spending some little time in Chicago taking treatment, returned home the middle of October much improved and ready to resume his work.

DR. JAMES A. EGBERT and family, of Indianapolis, left early in September, via automobile, for Los Angeles, Calif. Doctor Egbert will take some special post-graduate work in Los Angeles, and they will return to Indianapolis late in the winter.

DR. W. L. MISENER, of Richmond, has purchased a residence building at Richmond and will equip it as a private sanitarium, with treatment along the line of the Battle Creek Sanitarium. A graduate nurse of Battle Creek Sanitarium will be in charge.

DR. B. A. THOMPSON, of Kokomo, has been made judge advocate of the court martial for the Indiana units on the Mexican border at Llano Grande, Texas. Dr. Thompson has been serving as surgeon in the Third Indiana infantry, and has the rank of lieutenant.

It is announced that the New York Ophthalmic Hospital may be compelled to close its doors because of lack of funds, a marked falling off in subscriptions having occurred since the beginning of the war. Two of the free clinics for children have already been closed.

DR. FRED A. HENDERSON, son of Charles A. Henderson, druggist of Anderson, has located at Hartford for the practice of medicine and surgery. Dr. Henderson is a graduate of Jefferson Medical College of Philadelphia, and has served some time as intern at Kings County Hospital, Brooklyn.

IN consequence of the death of Dr. John B. Murphy, the field hospital organized by him as the Chicago medical unit, and forming part of the general field hospital of the British expeditionary force in France, has been disbanded. The unit had the distinction of winning the royal Red Cross medal, and of being twice mentioned in dispatches for effective work.

DR. HALSTEAD S. MURAT has resigned as chief physician at the Indiana Reformatory, Jeffersonville, and accepted a position as assistant superintendent of the medical department

of the Middletown (Ohio) Branch of the American Rolling Mill Company. Dr. Giles A. Mowrer, of Jeffersonville, has been appointed to fill the vacancy.

THE pharmaceutical house of Parke, Davis & Company will celebrate its fiftieth anniversary on October 26. In honor of this event, a very attractive and interesting souvenir booklet has been issued, containing a history of the firm since its organization, and illustrations of the laboratories, farms, offices, and all prominent men connected with the company.

ON July 11 the Rockefeller Foundation appropriated \$50,000 to the International Committee on Young Men's Christian Associations for the establishment and maintenance of recreation centers in connection with the military forces on the Mexican border. During the same month the Rockefeller Foundation appropriated the same amount to the Department of Health of New York to assist in controlling the epidemic of infantile paralysis.

DURING September the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

The Abbott Laboratories: Chlorazene, Chlorazene Tablets, 4.6 grains.

Merck and Company: Benzidine-Merck (for blood test).

E. R. Squibb and Sons: Thromboplastin-Squibb.

THE Ohio Valley Medical Association will hold its annual session at Evansville November 15 and 16, in the Y. M. C. A. building. Dr. B. L. W. Floyd, of Evansville, is secretary, and reports the following well known speakers among those who will contribute to the scientific program: Dr. J. H. Kellogg, Battle Creek; Dr. Curran Pope, Louisville; Dr. Morton Fisher, Cincinnati; Dr. G. M. Young, Evansville; Dr. William Shimer, Indianapolis; Dr. Rawson Pennington, Chicago; and Dr. W. F. Boggess, Louisville, Ky.

ANNOUNCEMENT is made concerning vacancies in the Medical Corps of the Indiana National Guard, nine of which are of the grade of First Lieutenant. The applicants should be under 35 years of age, and are required to pass medical and physical examinations before being commissioned by the Governor. While the

National Guard is in service, as at the present time, this position pays \$2,000 per year, with quarters free, and the experience of tropical service and army life. First class men in every respect are desired.

THE forty-fourth annual meeting of the American Public Health Association will be held at Cincinnati, October 24 to 27. A symposium on mental hygiene will be given the first afternoon, and on the morning of the second day there will be a symposium on public health nursing. Outside of the general session the work of the convention will be divided into public health administration; laboratory; vital statistics; sanitary engineering; sociology and industrial hygiene. Dr. John F. Anderson of New Brunswick, N. J., is president.

THE American Association of Obstetricians and Gynecologists, with Dr. H. O. Pantzer, of Indianapolis, as president, convened at Indianapolis September 25 and 26 in annual convention. An interesting and profitable program filled the two days, and closed with a banquet on Tuesday night, at which Dr. Robert T. Morris presided as toastmaster. The following officers were elected for the ensuing year: President, Dr. John Keffe, Providence, R. I.; vice presidents, Drs. Francis Rader, St. Louis, and Charles Ill, Newark, N. J.; Secretary, Dr. E. Gustaf Zinke, Cincinnati; and Treasurer, Dr. Herman Hays, Buffalo, N. Y.

THE National Association for the Study and Prevention of Tuberculosis announces that in October five conferences on tuberculosis are to be held in various parts of the country. The Mississippi Valley Conference will meet at Louisville, Ky., October 4 to 6; the New England Conference in New Haven, Conn., October 12 and 13; the Southern States Conference at Albuquerque, N. M., October 12 and 13; the North Atlantic Conference in Newark, N. J., October 20 and 21, and the Southern Conference at Jackson, Miss., October 30 and 31. A feature of the programs of all these conferences will be informal round-table discussions led by experts in various lines.

THE annual meeting of the Medical Society of the State of Pennsylvania was held in Scranton on September 19 and 20. Officers for the coming year were elected as follows: President, Dr. Samuel G. Dixon, Philadelphia; 1st Vice

President, Dr. John B. Corser, Scranton; 2d Vice President, Dr. Joseph W. Albright, Muncy; 3d Vice President, Dr. George H. Boyer, Allentown; 4th Vice President, Dr. John O. Wagner, Beaver Springs; Secretary, Dr. Cyrus Lee Stevens, Athens; Assistant Secretary, Dr. Clarence P. Franklin, Philadelphia; Treasurer, Dr. George W. Wagoner, Johnstown. The 1917 meeting will be held at Pittsburgh.

THE 1916 edition of the American Medical Directory contains a complete list of medical journals published in the United States. The journals were asked to furnish two items of information: first, whether the journal conformed to the standards of the Council on Pharmacy and Chemistry; and second, to furnish a sworn statement of circulation. In both cases the facts were to be printed in black face type in the directory. The statistical results show that out of the 257 medical journals and bulletins, only 133 conform to the standard; 196 of them accept advertisements, 61 do not. Only 55 of the 257 give sworn statements of circulation. Of those that accept advertisements, 41 give sworn statements of circulation. Only 38 out of the 196 that accept advertisements conform to the standards and furnish sworn circulation; of these 38 journals, 28 are the official state medical journals.—*Texas State Journal of Medicine*.

THE Northern Tri-State Medical Association will hold its forty-third annual meeting on Tuesday, October 24, in the auditorium of the Oliver Hotel, South Bend, Ind. The following program of scientific papers has been arranged: "Diagnosis and Treatment of Injuries to the Head," Dr. Charles M. Harpster, Toledo; "What the Generalist Should Know About the Pathology of the Mammary Glands," Dr. Plinn F. Morse, Detroit; "The Advantages of Local Anesthesia in Herniotomy, with Report of Two Hundred Cases," Dr. J. H. Jacobson, Toledo; "How Shall We Treat Fractures of Long Bones?" Dr. Murray N. Hadley, Indianapolis; "Practical Value of X-Ray Examinations of the Accessory Nasal Sinuses, and Mastoids," Dr. P. M. Hickey, Detroit; "Clinical Diagnosis of Nasal Accessory Sinuses and Mastoid Infections," Dr. Edward J. Bernstein, Kalamazoo, Mich.; "The Present Status of Infantile Paralysis," Dr. Frank X. Walls, Chicago; "Some Phases of Renal Diseases," Dr. G. W. McCaskey, Fort Wayne; "Pelvic Infections," Dr. Thomas J. Watkins, Chicago.

SOCIETY PROCEEDINGS

INDIANA STATE MEDICAL ASSOCIATION

Minutes of the Fort Wayne Session —
September 28 and 29, 1916

GENERAL MEETINGS

The first general meeting was called to order in the Assembly Room of the Elks Club, Fort Wayne, at 8:45 on the morning of Sept. 28, 1916, by the president, Dr. George F. Keiper of Lafayette.

Dr. Keiper read his address.

Dr. Murray N. Hadley, Indianapolis, read a paper on "The Influence of Modern Immunity Research on Surgery."

Dr. Charles B. Danruther, Laporte, read a paper on "The Influence of Modern Research on Medicine."

These papers were discussed by Drs. V. H. Moon, Indianapolis; George W. Spohn, Elkhart; L. F. Schmauss, Alexandria; Edw. L. McCoy, Columbus, and closed by Drs. Hadley and Danruther.

Mr. G. V. Sheridan, Columbus, Ohio, executive secretary of the Ohio State Medical Association, then gave a short talk on his line of work in that association.

General session adjourned, the various sections taking up their work.

The second general meeting was called to order at 2:15, September 29, by the president. Mr. Howe S. Landers, Indianapolis, secretary, State Industrial Board, read a paper on "The Workmen's Compensation Law in Its Relation to the Practice of Medicine." Discussed by Drs. J. H. Oliver, Indianapolis; Alfred E. Sterne, Indianapolis; W. D. Calvin, Fort Wayne; George F. Beasley, Lafayette; A. M. Hayden, Evansville; William R. Moffitt, West Lafayette; Walter K. Schlosser (Plymouth); B. P. Weaver, Fort Wayne; Edw. E. Evans, Gary; E. M. Shanklin, Hammond, and closed by Mr. Landers.

Meeting adjourned.

SECTION ON MEDICINE

The first meeting was called to order by the chairman, Dr. W. R. Davidson of Evansville, at 11 a. m., September 28, in the Assembly Room of the Elks Club, Fort Wayne. Dr. O. B. Nesbit, Gary, acted as secretary in the absence of Dr. J. A. MacDonald.

Dr. George W. McCaskey, Fort Wayne, read a paper on "The Incidence, Diagnosis and Treatment of Visceral Syphilis." Discussed by Drs. A. W. Brayton, Indianapolis; Charles P. Emerson, Indianapolis; Henry A. Christian, Boston; F. W. Cregor, Indianapolis; Albert E. Sterne, Indianapolis; C. F. Neu, Indianapolis, and closed by Dr. McCaskey.

Drs. F. B. Wynn and R. C. Beeler, Indianapolis, read papers (with lantern slide demonstration) on "The Necessity of Coordinating Methods in the Definitive Diagnosis of Pulmonary Tubercular Lesions."

Owing to the lateness of the hour there was no discussion of these papers.

The second meeting of the medical section was called to order at 9:15 a. m., September 29, by the chairman.

Dr. T. C. Kennedy, Indianapolis, read a paper on "Radium Therapy." Discussed by Drs. Maurice I.

Rosenthal, Fort Wayne; W. F. Carver, Albion; E. O. Daniels, Marion, and closed by Dr. Kennedy.

The chairman announced that Dr. Edwin Walker (who was to have discussed this paper) had been very ill, but is rapidly recovering. Moved, seconded and carried that the medical section send to Dr. Walker its congratulations on his return to health.

Dr. Alfred Henry, Indianapolis, read a paper on "Tuberculosis—Plus." Discussed by Drs. S. B. Simms, Frankfort; E. L. McCoy, Columbus; George W. McCaskey, Fort Wayne; E. D. Clark, Indianapolis; Paul S. Johnson, Sheridan; William R. Moffitt, West Lafayette, and closed by Dr. Henry.

Election of officers for the medical section resulted as follows: chairman, H. H. Miller, South Bend; vice chairman, E. O. Daniels, Marion; secretary, J. A. MacDonald, Indianapolis.

Dr. H. H. Miller, South Bend, read a paper on "The Diagnosis in Certain Gastric Disorders." Discussed by Drs. A. B. Graham, Indianapolis; M. F. Porter, Jr., Fort Wayne; F. W. Foxworthy, Indianapolis; George W. McCaskey, Fort Wayne, and closed by Dr. Miller.

Section adjourned.

SECTION ON SURGERY

The surgical section met in the lodge room of the Elks Club, and was called to order at 11 a. m., September 28, by the chairman, Dr. John H. Oliver, Indianapolis.

Dr. Edmund D. Clark, Indianapolis, read a paper entitled "Advanced Ectopic Pregnancy and Report of Cases," which was discussed by Drs. Charles M. Mix, Thomas B. Eastman, Charles Stoltz, J. W. McCausland, H. A. Duemling, H. H. Martin, A. M. Hayden, A. S. Jaeger, Leonard F. Schmauss, J. W. Shafer, D. S. Wiggins, J. R. Andrew, Charles C. Terry, John Sluss, and discussion closed by the author of the paper.

Dr. J. W. Shafer, Lafayette, read a paper entitled "Conservatism in Cesarean Section," which was discussed by Drs. A. S. Jaeger, Thomas B. Eastman, H. A. Duemling, Louis Burkhardt, Charles C. Terry, and discussion closed by the essayist.

Dr. A. F. Knoefel, Terre Haute, was present to read his paper on "First Aid to the Injured as Taught by the Bureau of Mines," but as the hour for adjournment had arrived, the reading of the paper was postponed until the Friday morning session.

Adjourned.

The section met for its second meeting at 9 a. m., September 29, and was called to order by the president.

The election of officers being the first order of business, the following gentlemen were nominated and declared duly elected: chairman, Dr. Charles Stoltz, South Bend; vice chairman, Dr. John C. Fleming, Elkhart; secretary, Dr. David Ross, Indianapolis.

The president, Dr. George F. Keiper, stated that the United States government wanted eight or ten young doctors to enlist as lieutenants for medical service on the border. The salary is \$2,000 a year. Dr. Frank W. Foxworthy of Indianapolis has been commissioned by the government to receive applications.

On motion, the paper of Dr. Knoefel was ordered read by title and printed in the proceedings.

Dr. Thomas B. Eastman, Indianapolis, read a paper entitled "Hyperthyroidism and Its Relation to Certain Pelvic Disorders of Women," which was discussed by Drs. Maurice I. Rosenthal, H. A. Duenling, Cornelius H. Myers, Charles M. Mix, A. C. McDonald, John C. Fleming, H. O. Bruggeman, Miles F. Porter, and the discussion closed by the author of the paper.

Dr. George F. Beasley, Lafayette, read a paper entitled "The Evolution of the Splint," which was discussed by Drs. Charles Stoltz, H. R. Allen, George D. Marshall, John H. Oliver, Leonard F. Schmauss, John C. Fleming, Maurice I. Rosenthal, and discussion closed by the author of the paper.

Dr. Maurice I. Rosenthal, Fort Wayne, followed with a paper entitled "Occlusive Drainage for Empyema of the Chest, with Demonstration of Operation and Instruments."

This paper was discussed by Drs. H. R. Allen, George F. Beasley, John C. Fleming, H. O. Bruggeman, Leonard F. Schmauss, Charles M. Mix, and discussion closed by the essayist.

Dr. John C. Fleming, Elkhart, read a paper on "Factors Which Contribute to Safety and Success in Surgical Procedures."

This paper was discussed by Drs. Charles C. Terry, H. H. Martin, J. Christopher O'Day (Portland, Ore.), George D. Marshall, Leonard F. Schmauss, Charles Stoltz, Maurice I. Rosenthal, Miles F. Porter, Charles M. Mix, and discussion closed by the essayist.

Adjourned sine die.

EYE, EAR, NOSE AND THROAT SECTION

The first meeting of the Eye, Ear, Nose and Throat Section of the Indiana State Medical Association was held in the dining room of the Elks Club, Fort Wayne, September 28. Dr. Lafayette Page, vice chairman, called the meeting to order at 11 a. m.

Dr. Albert E. Bulson, Jr., of Fort Wayne read the chairman's address, subject: "Conservative Treatment of Penetrating Wounds of the Eyeball."

The discussion was opened by Drs. George F. Keiper of Lafayette, and H. E. Glock of Fort Wayne, followed by Drs. William Campbell Posey of Philadelphia (by special request of the section), Joseph D. Heitger of Bedford, George W. Spohn of Elkhart, and A. E. Bulson, Jr., closing.

Dr. George W. Spohn of Elkhart read a paper entitled "A Working Knowledge for the Generalist in Ophthalmology and Oto-Laryngology."

The discussion was opened by Dr. E. M. Shanklin of Hammond, Dr. F. C. Heath of Indianapolis being absent. Dr. Shanklin was followed in the discussion by Dr. Frank A. Morrison of Indianapolis. Dr. Spohn had no closing remarks.

Dr. W. F. Hughes of Indianapolis read a paper entitled "Cataract."

Dr. L. D. Brose of Evansville being absent, Dr. S. A. Shoemaker of Bluffton opened the discussion, followed by Dr. A. L. Marshall of Indianapolis; Dr. Hughes closing.

On motion the meeting adjourned until 2 o'clock p. m.

The second meeting was called to order at 2:15 p. m. by the chairman of the section, Dr. A. E. Bulson, Jr., of Fort Wayne.

After a brief introduction by the chair, Dr. William Campbell Posey of Philadelphia, guest of the section,

gave an address on "Certain Phases of the Diseases of the Lacrimal Apparatus," with photographic illustrations and charts.

The discussion was opened by Drs. Frank A. Morrison and Thomas C. Hood of Indianapolis; followed by Drs. George W. Spohn of Elkhart, K. K. Wheelock of Fort Wayne, George F. Keiper of Lafayette, Albert E. Bulson, Jr., and H. E. Glock of Fort Wayne; Dr. Posey closing.

Dr. William F. Clevenger of Indianapolis opened the symposium on "The Mastoid" with his paper entitled "Infections of the Mastoid. Skiagraph and Other Aids to Early Diagnosis."

Dr. Hugh K. Langdon of Indianapolis not being present, Dr. Bernard Erdman of Indianapolis read Dr. Langdon's paper, the second in the symposium on "The Mastoid," entitled "Bacteriology of Mastoiditis."

The chair announced that it was the intention to hear all the papers in the symposium and that they be discussed jointly, but that Dr. K. K. Wheelock of Fort Wayne, who was to open the discussion, had to leave the city, and if the section desired to hear his remarks it would be necessary to call on him at this time.

It was moved and carried that Dr. Wheelock's discussion be heard.

Dr. Albert M. Cole of Indianapolis not being present, Dr. Raymond C. Beeler of Indianapolis read the third paper in the symposium by Dr. Cole, entitled "Roentgen Diagnosis of Mastoiditis."

Discussion by Drs. E. J. Lent of South Bend, Daniel W. Layman of Indianapolis, Joseph D. Heitger of Bedford, George W. Spohn of Elkhart, Joseph Maurer of Marion, W. A. Hollis of Hartford City, S. A. Shoemaker of Bluffton, Lafayette Page of Indianapolis; Raymond C. Beeler of Indianapolis closing.

On motion the meeting adjourned at 6:05 p. m.

The third meeting was called to order by the president of the association, Dr. George F. Keiper, in the absence of the chairman or vice chairman of the section, at 9:15 a. m.

The first order of business was the election of officers for the ensuing year, the election resulting as follows: chairman, Dr. Lafayette Page, Indianapolis; vice chairman, Dr. John R. Newcomb, Indianapolis; secretary, Dr. E. M. Shanklin, Hammond.

Dr. C. Norman Howard of Warsaw being ill, it was moved and carried that Dr. G. W. Spohn of Elkhart should read Dr. Howard's paper entitled "A Review of Prescription Work."

Dr. Keiper retired from the chair and Dr. Page, vice chairman, came forward to preside.

Dr. Page retired from the chair and Dr. Bulson, the chairman, presided.

The discussion was opened by Dr. John R. Newcomb of Indianapolis. Dr. M. T. Jay of Portland was absent. Dr. Newcomb was followed in the discussion by Drs. George F. Keiper of Lafayette, Joseph D. Heitger of Bedford, Albert E. Bulson, Jr., of Fort Wayne; Dr. G. W. Spohn of Elkhart closing.

Dr. Lafayette Page of Indianapolis read a paper entitled "Cancer of the Larynx," with photographic illustrations and specimens of cases.

Drs. E. de Wolfe Wales of Indianapolis and M. S. Smith of Laporte, who were to open the discussion,

were absent, so the discussion was led by Dr. G. W. Spohn of Elkhart, followed by Dr. Joseph D. Heitger of Bedford; Dr. Page closing.

Dr. Joseph Maurer of Marion read a paper entitled "Errors in Diagnosis of Nonsuppurative Diseases of the Accessory Sinuses."

Dr. Joseph D. Heitger being a member of the House of Delegates, the chair suggested that he be permitted to read his paper at this time and that the two subjects be discussed jointly.

Dr. Joseph D. Heitger of Bedford read a paper entitled "The Diagnosis of Maxillary Sinusitis."

The discussion was opened by Drs. M. Ravdin of Evansville, and W. A. Hollis of Hartford City, followed by Drs. Lafayette Page of Indianapolis, Joseph D. Heitger of Bedford, Fred M. Ruby of Union City, and Joseph Maurer of Marion; Dr. Heitger closing.

On motion the meeting adjourned sine die.

House of Delegates

FORT WAYNE SESSION, 1916

The first regular meeting of the House of Delegates convened at 7 p. m., Sept. 27, 1916, in the assembly room of the Commercial Club of Fort Wayne. President George F. Keiper occupied the chair, and roll call found a quorum present. On account of the lack of time the reading of the minutes of the last session was omitted, as the same had been printed in *THE JOURNAL*.

The reports of the officers were called for, and Dr. Charles N. Combs, secretary-treasurer, presented his report as printed, and the same was accepted without discussion.

The reports of the following committees were adopted without discussion, as published in the September, 1916, number of *THE JOURNAL*: Arrangements, Scientific Work, Public Policy and Legislation, Credentials, Publication, Health, Public Instruction and Medical Publicity, Scientific Exhibit.

The report of the Committee on Necrology was accepted, and the president of the House of Delegates thanked Dr. Kemper for his faithful work on this committee, and urged the members to procure copies of Dr. Kemper's "Medical History of Indiana."

The report of the Committee on Medical Defense was adopted as printed. It was a matter of the greatest satisfaction that this committee has successfully defended every case attempted, and moreover, due to the strictest economy in management and to the fact that the members of the committee have not asked pay for their services, the fund at the disposal of this committee is actually larger than it was one year ago. A delegate asked if this committee would defend a case whether it had merit or not, in reply to which Secretary Combs read the by-law providing that the merits of the case must first be passed upon by a committee from the county medical society.

The report of the Committee on Medical Economics was accepted.

The president announced that this association had appropriated \$100 to cover the expense of an Indiana State Medical Association scientific exhibit at the Detroit session of the American Medical Association. The exhibit attracted much attention at Detroit, and the Committee on Awards voted it a certificate

of honor. It was therefore worth the expense to this association.

The report of the Committee on Conservation of Vision and Hearing was adopted as printed. A resolution asking for a permanent committee on Conservation of Vision and Hearing and for an appropriation of \$100 to cover the expenses of such committee for the year 1917 was laid on the table.

The report of the president, Dr. George F. Keiper, detailed the multitudinous activities which had engaged his time during his tenure of office, showing that he had been commendably active in visiting the district and county societies. As a result of the year's work he made the following recommendations:

"All ex-presidents of this Indiana State Medical Association should be made permanent members of the House of Delegates, as in some of our sister state medical associations. These men will be in possession of the history, spirit and traditions of the organization and they will become a conservative body which will protect the organization against rash legislation at times. Moreover this is nothing but their due for the service which they rendered.

"If public health is to be advanced in this state it is necessary to have the all-time health officer at work, with such legislation as relates to medical supervision as may be necessary. Hence I would recommend that this House of Delegates by resolution or otherwise endorse the efforts of the Indiana State Board of Health to secure these results, before the forthcoming session of the general assembly.

"The state board of health should have in operation a division devoted to the welfare of the child, and that is its wish. This should be endorsed and action looking to its creation by the next general assembly should have the support of our entire medical profession.

"Inasmuch as the medical profession of this state has decided that one medical college is sufficient for three million people, that medical college, a department of the University of Indiana, and thus belonging to the citizenship of this state, should have the material equipment necessary to make it as great as the greatest. Hence new buildings are necessary for that development. Hence this House of Delegates will do well if it will go on record as favoring thus the advancement of medical education in this state.

"The state medical associations of Pennsylvania, Maryland, North Carolina, Ohio and Michigan have successfully brought postgraduate medical education right to the county medical society. This work is worthy of emulation in this organization. Hence I would recommend that such work be undertaken within our own borders. It can be centralized in our organization by the appointment of a committee to undertake such work. Hence it will be wise, I believe, for this House of Delegates to endorse the idea, recommending to my successor that he appoint such committee for such work.

"Unless a paper is part of a symposium, it shall be read before the section to which it properly belongs."

Moved by Dr. A. E. Bulson, Jr., that the recommendations of the president be referred to a committee of three, which shall report to the meeting of the House of Delegates on Friday morning. Dr.

Bulson also moved a vote of thanks to the president for his activities for the past year, which was seconded and carried.

Dr. O. B. Nesbit presented the following resolution:

WHEREAS, The problem of the mental defective is one of the greatest social and medical as well as financial burdens, and it is increasing in importance and weight every year; and

WHEREAS, Mental defectiveness is one of our important medical problems and it is believed to be one of the most important if not the most important cause of pauperism, degeneracy and crime; and

WHEREAS, The committee appointed by the governor to consider the problems of mental defectiveness in Indiana has called a state conference on mental defectives to meet in Indianapolis Oct. 16 and 17, 1916; therefore be it

Resolved, That the Indiana State Medical Association expresses its interest in this meeting, and that the president be hereby directed to appoint one delegate from each congressional district to represent this association at the above named conference.

Moved and carried that the resolution be adopted.

Dr. S. P. Hoffmann presented the following resolution:

The Adams County Medical Society, honored by the illustrious past in the history of medicine, ever mindful of its world-wide beneficence in relieving the suffering and restoring to health those sorely afflicted, and deeply concerned as to its future, begs leave to submit the following to this House of Delegates for its consideration:

WHEREAS, The state of Indiana has a statute defining and regulating the practice of medicine; and

WHEREAS, That statute is constantly being violated by individuals who escape the penalty imposed by it by masquerading under various titles and using divers methods; and

WHEREAS, One body of men calling themselves chiropractors have been and are creating influence to bring to bear on the next session of our legislature, to have a law passed declaring that they do not come under the aforementioned act, which defines and regulates the practice of medicine; be it

Resolved, That this House of Delegates appoint a committee to formulate such bill or bills as will more clearly define the practice of medicine in its relation to all methods used, and make such definition potent and applicable to all persons desiring to follow the art of healing or the practice of medicine in this state. Said committee to introduce such bill at the next session of the Indiana legislature, and are authorized to use all fair and legal means to secure its enactment as a law.

S. P. HOFFMANN,
J. W. MILLER (President),
S. D. BEAVER (Secretary).

On motion the resolution was referred to the Committee on Legislation.

Dr. S. P. Hoffmann presented the following:

At the June meeting of the Adams County Medical Society the following resolution was unanimously passed:

WHEREAS, The United States revenue measure regulating the sale and dispensing of opium and coca leaves or their derivatives is a humiliating and unwarranted governmental espionage of the medical profession, and places an unnecessary hardship, indignity and annoyance on every physician; therefore be it

Resolved, That the Adams County Medical Society is unalterably opposed to this "antinarcotic" law, and hereby petitions the Indiana State Medical Association to immediately institute such measures as may be necessary to insure its repeal.

J. W. MILLER (President),
S. D. BEAVER (Secretary).

It was moved and carried that the resolution be tabled.

Dr. G. W. H. Kemper presented the following resolution:

WHEREAS, The health of its citizens is one of the most valuable assets of the state; and

WHEREAS, The health of the citizens is best protected where the well are best guarded from illness by the intelligent application of the truths of preventive medicine, and the sick receive the most skilled treatment; and

WHEREAS, The success of both of these measures is determined in large measure by the standard of education of the doctors who serve their community as practicing physicians and health officers; and

WHEREAS, The state of Indiana has assumed the responsibility of medical education within its borders; therefore be it

Resolved, That we, the members of the Indiana State Medical Association, express to the members of the state legislature our firm conviction that the state of Indiana should provide adequately for the education of medical students. As one means of furthering this we heartily recommend to the state legislature that sufficient appropriation be made for a suitable medical school building, as the present building is antiquated and thoroughly inadequate.

On motion the resolution was referred to the committee appointed to report on the recommendations of the president.

Dr. W. R. Moffitt introduced the following resolution:

WHEREAS, It is one of the duties of scientific medicine to instruct and lead the public in matters pertaining to hygiene and the public health, therefore be it

Resolved, That the Indiana State Medical Association endorses and recommends to the people and the law-making powers the enactment of a statute creating all-time professional health officers throughout the state, and it also recommends, that a division of child hygiene be established under the state board of health for the better conservation of the health and lives of the children of the state.

On motion the resolution was referred to the committee appointed to report on the recommendations of the president.

Dr. H. M. Baker introduced an amendment to Article 5, of the Constitution, which would add to the membership of the House of Delegates three ex-presidents of the Indiana State Medical Association taken in order of recent service. Referred to the Committee on the Recommendations of the President.

Dr. H. O. Bruggeman moved that all committees be instructed to report back on Friday morning. Carried.

The president then introduced Mr. G. V. Sheridan of Columbus, executive secretary of the Ohio State Medical Association, who prefaced his remarks by complimenting the Indiana State Medical Association on the following points: First, the high rank of our State Journal, which he considered the best

state medical journal published. Second, the economical and successful medical defense feature, as compared with such features in other states. Third, our scientific exhibits. He then described his scheme of organization in Ohio, which is much more efficient than our own. The Ohio State Medical Association has raised its dues until it is now spending about \$18,000 a year, with Mr. Sheridan, an ex-newspaper man, in charge of an office employing four or five stenographers. This office represents the members of the association and works for the betterment of the medical profession in every particular. It keeps the physicians informed concerning every detail of legislation affecting doctors. It represents the members in dealing with the Workmen's Compensation Law, and has been instrumental in raising the fees. It has secured the passage of a law covering cult practice, which is acknowledged to be the best in the United States. It has built up the membership of the association, and has taken up all the details of the work of the officers of the committees, and yet it is just beginning to plan work which will be of still more benefit to the doctors.

Moved by Dr. A. E. Bulson, Jr., that a vote of thanks be extended Mr. Sheridan for his instructive and helpful address. Seconded by Dr. Sterne, who said we should emulate Ohio. Motion carried by a rising vote.

Moved by Dr. F. A. Tucker that the president appoint a committee of three to confer with Mr. Sheridan and report back to the House of Delegates as to the means of procedure by which something similar to the Ohio plan may be adopted in Indiana. Motion carried.

The president appointed on this committee F. A. Tucker, Noblesville; C. H. Good, Huntington; George T. McCoy, Columbus.

The president appointed as a committee on recommendations of the president: A. M. Hayden, Evansville; W. F. Howat, Hammond; H. M. Baker, Holland.

THE PRESIDENT: We have invited to this meeting Drs. Bloodgood, Christian, and Posey, to speak before the sections and at the public meeting, and it does seem that it would be no more than right that this association should pay their traveling expenses.

DR. A. E. STERNE: That is customary.

The president then appointed Dr. O. B. Nesbit as secretary of the medical section, to take the place of Dr. J. A. MacDonald, who cannot be present.

Adjourned.

The final meeting of the House of Delegates of the Fort Wayne Session was held Friday, September 29, at 11 a. m., President Keiper in the chair.

The election of officers, which was the first business, resulted in the selection of the following to serve for one year from Jan. 1, 1917: president, John H. Oliver, Indianapolis; first vice president, John W. Phares, Evansville; second vice president, C. M. Mix, Muncie; third vice president, George Guthrie, Indianapolis; secretary-treasurer, Charles N. Combs, Terre Haute (reelected); delegates to the American Medical Association for two years, C. H. Good, Huntington; Miles F. Porter, Fort Wayne (both reelected); alternates, C. A. White, Danville; A. M. Hayden, Evansville (both reelected).

The following councilors were duly elected by their respective district societies: J. D. Heitger, Bedford,

Third District; O. J. Gronendyke, Newcastle. Sixth District; F. A. Tucker, Noblesville, Ninth District. They were recognized as being qualified to serve for the ensuing three years.

Next place of meeting, Evansville, Sept. 26, 27 and 28, 1917.

Dr. A. E. Sterne reported the temporary absence of the chairman of the Committee on Medical Defense, Dr. J. Rilus Eastman, and he was empowered to serve as chairman ad interim.

The following report was then submitted:

Fort Wayne, Ind., Sept. 27, 1916.

To the House of Delegates:

The committee appointed to consider the recommendations made by the president of your body respectfully beg to report as follows:

First, we endorse the proposition to make all ex-presidents of the Indiana State Medical Association permanent members of the House of Delegates, and recommend that the amendment proposed to Article 5 of the Constitution be submitted to the association in the regular way for its adoption or rejection.

Second, we endorse the recommendations of the president concerning the all-time health officers, and also the efforts of the Indiana State Board of Health to secure such legislation as may be necessary to promote the public health of the state.

Third, we endorse the recommendation for the creation of a division of the state board of health devoted especially to child welfare.

Fourth, we favor the adequate equipment of the Department of Medicine and Surgery in Indiana University, both as to buildings and other equipment, so as to render it as efficient as similar institutions in other states. We recommend that the members of this association urge on their legislators the necessity for the appropriation of such money as may be necessary for this purpose.

Fifth, we recommend the appointment of a permanent committee to devise ways and means of carrying postgraduate work to the members of the Indiana State Medical Association.

Sixth, we concur in the ruling of the president in placing the essayists in the sections.

A. M. HAYDEN,
W. F. HOWAT,
H. M. BAKER.

Section 1 was amended to read, "The last three ex-presidents retiring from office shall be members of the House of Delegates." The remaining sections were adopted as read.

The following report was presented by the committee appointed to consider means of procuring an executive secretary for the association:

We, the committee to which was referred the question of securing an executive secretary of the Indiana State Medical Association, to be located at Indianapolis, whose duties shall be to look after the interests of the membership of the Indiana State Medical Association in all matters pertaining to public welfare, publicity, education and legislation, would recommend

(1) That a committee be appointed by the president of this association, consisting of five (5) members, two (2) of which shall be the retiring president and president-elect. The duties of this committee shall be to secure the proper person, not necessarily a medical man, to act as executive secretary of this association, and such other help as may be necessary,

and to perform such other duties as may rightfully come before them.

(2) That proper funds may be secured for the furtherance of this work, we would recommend that the annual dues of this association shall be increased.

(3) That any funds belonging to this association, not otherwise appropriated, shall be available for the furtherance of the work of this committee, until such time as the membership dues shall be sufficient for said purposes.

(Signed) FRED A. TUCKER,
GEORGE T. MCCOY,
CHARLES H. GOOD.

Moved and carried that the report be accepted.

The president appointed the following committee, according to the instructions: Dr. A. E. Sterne (chairman), Indianapolis; Dr. F. A. Tucker, Noblesville; Dr. George T. McCoy, Columbus; Dr. John H. Oliver (incoming president), Indianapolis; Dr. George F. Keiper (retiring president), Lafayette.

The following report was presented:

We, your committee, recommend that the resolution formally offered and ordered to be printed in *THE JOURNAL* twice before the next annual session and brought up for final action at that time. Amend Article 5 to read as follows:

W. R. MOFFIT, Chairman,
G. T. MCCOY,
W. N. WISHARD.

On motion the report was adopted.

The following amendments to the constitution were formally offered and ordered to be printed in *THE JOURNAL* twice before the next annual session and brought up for final action at that time. Amend Article 5 to read as follows:

The House of Delegates shall be the legislative and business body of the Association, and shall consist of (1) Delegates elected by the component county societies, (2) the Councilors, (3) the last three ex-presidents, and (4) ex officio, the president and secretary of the Association.

Article 9, Section 4, to read as follows, adding the words: "and provided further that if a councilor district society fails to meet to elect its councilor, the councilor for said district shall be elected by the House of Delegates."

Section 11, concerning the annual dues to the association, to be amended to read \$4 instead of \$2.

The House sent a message of good cheer to Dr. Edwin Walker, who was detained from this session on account of sickness.

A rising vote of thanks was tendered the Fort Wayne Medical Society, and the city of Fort Wayne for the entertainment which has been offered this Association.

Dr. John H. Oliver, the president-elect, was then escorted to the chair, and addressed the House concerning his plans for the coming year's work.

Adjourned. CHARLES N. COMBS, Secretary.

The Council

The first meeting of the Council was held at 5 p. m., Wednesday, September 27, with the following responsive to the roll call: Drs. J. B. Maple, J. D. Heitger, G. W. H. Kemper, F. A. Tucker, O. B. Nesbit, G. G. Eckhart and E. E. Morgan. President Keiper and Drs. A. E. Bulson, Jr., and C. N. Combs were also present. Dr. Kemper was nominated as tem-

porary chairman in the absence of Dr. W. R. Davidson.

The first business on hand was the reports of the councilor districts. In the main these reports were as printed in *THE JOURNAL*, and seemed to indicate that while no marked progress had been made in organization, the interest in the district societies had at least been up to its previous standard. It was apparent that district societies flourished better in districts having no single very large city. In a few of the districts, however, the district societies are the most important meetings held, overshadowing even the county society meetings. In the Tenth District enthusiasm was so intense that they have had to hold more meetings than had been planned for the year.

Some of the county societies report better meetings when they are held at the different physicians' houses, preceded by a luncheon. Others entertain the ladies also at a dinner given in the evening. One large county society reports an attendance of 50 per cent. of the members by holding meetings once a month with a dinner at a hotel at 6 p. m.

The Council then listened to some very profitable advice from Mr. G. V. Sheridan, executive secretary of the Ohio State Medical Association. Among other things he advocated the plan of having the council, as the finance committee, prepare a budget at the beginning of the year in order that the funds might not be appropriated for miscellaneous purposes during the year without due sense of proportion.

The last meeting of the Council was held at 12:30 p. m., Friday, September 29, with Drs. Maple, Heitger, Kemper, Tucker, Nesbit, Morgan, McDonald and Combs present. Dr. W. R. Davidson having presented his resignation as chairman, Dr. G. W. H. Kemper, Nestor of the Council, was elected chairman for the ensuing year. Motion was made and carried that the Medical Defense Committee present its accounts at the January meeting of the Council to be audited. The current bills for the Fort Wayne session were referred to the Auditing Committee.

Adjourned. CHARLES N. COMBS, Secretary.

The registration at the Fort Wayne session was 381, although as usual a considerable number of physicians came for the purpose of listening to the papers, and refused to be annoyed by such a trivial matter as registering. An attendance, however, of over 400, which is a safe figure, is very gratifying for a meeting held so far from the geographical center of the state, and there is no reason for complaint concerning attendance. The sectional attendance was as follows: Medical 236, Surgical 101, Eye, Ear, Nose and Throat 44.

BARTHOLOMEW COUNTY

The Bartholomew County Medical Society met in regular session September 12 in Dr. Kirkpatrick's office and was called to order by the president, Dr. Maris, at 8:30 p. m. We were expecting two papers for the meeting, Dr. D. Marshall on "Erysipelas," and Dr. E. S. Regenias on "Puerperal Eclampsia," but for some unavoidable reason neither of the doctors could be present.

A communication was read from the committee on Red Cross medical work of the American Medical Association, Washington, D. C., in regard to forming a committee on Red Cross medical work in our local society. The secretary was instructed to acknowledge the same and action would be taken later on.

Dr. George T. MacCoy and Dr. A. J. Banker gave reports on several cases of puerperal eclampsia, which were very interesting. They both advise quick delivery, medicinal treatment, veratrum-virid in large doses, bromids, chloral and blood letting. Dr. Banker gave a history of a case he had back in 1869.

Adjourned.

JAMES W. BENHAM, Secretary.

DELAWARE COUNTY

Meeting of September 1, 1916

Regular meeting of Delaware County Medical Society was held in Muncie Y. M. C. A. Building, Friday evening, September 1, and was called to order at 8:15 by President C. A. Ball.

C. A. Ball was elected delegate to the state meeting to be held at Ft. Wayne September 27, and I. N. Trent elected alternate.

Dr. George W. McCaskey of Ft. Wayne delivered an address on "The Diagnosis of Renal Disease," from which the following was taken by the secretary: The normal adult who has no renal lesion or disease is very rare. But few persons escape some degree of damage to the kidney. This is not surprising when we realize that acute and chronic infectious diseases and focal infections either of the mouth or pelvis and dietetic errors always affect the kidney to a certain extent. Every individual of middle age would find it greatly to his advantage to have a physical examination every six months. Our usually accepted classification of kidney disease is not final. The interstitial or parenchymatous types are seldom limited to such tissues. A better arrangement would be (a) degenerative, (b) inflammatory, and (c) sclerotic. The degenerative type is usually limited to epithelial cells of the tubules. There may be some edema; no tendency to cardiac failure. Inflammatory type implies disturbed function with involvement of the glomerulus. High tension cases are usually found in the sclerotic group. Accurate diagnosis must be based on (1) urinary findings; (2) symptoms, and (3) functional tests. Absence of casts or presence of albumin are not conclusive and must be correlated with other findings. The total output and relative S. P. are very important. In the functional test the output of urea and salts must be compared with the intake; otherwise the test is useless. The power to eliminate nitrogen, which is equivalent to toxins, is important. Urea in the blood is no criterion, but creatinin is significant. The potassium bichromate and thallin tests are essential to careful diagnosis. It is difficult to differentiate between the spastic and sclerotic types of the disease.

When it comes to treatment, there is no specific for renal disease. One of the essentials is the regulation of diet. Retention of urea calls for a low protein diet. Autogenous or stock bacterins are useful when the condition is the result of a particular germ gaining entrance through focal infection. A badly diseased kidney may repair itself and the lesion cause

no further disturbance. The time is past when the tests for S. G., albumin and sugar are sufficient to determine the presence or absence of renal disease.

Dr. McCaskey was tendered a vote of thanks.

Adjourned.

H. D. FAIR, Secretary.

DUBOIS COUNTY

Dubois County Medical Society met in regular session at the courthouse in Jasper, Tuesday, August 15. The meeting was called to order by the vice president, Dr. Joseph Casper. The minutes of the previous meeting were read and approved. On motion by Dr. A. O. Bigham, a committee was appointed to arrange a feature to represent the society in the centennial parade at Huntingburg September 22. Drs. S. L. McKinney, Leo Salb and A. O. Bigham were appointed to serve on this committee. It was decided to hold the September meeting one week earlier so that delegates might be appointed to the state meeting. Paper by Dr. A. O. Bigham, "Summer Diarrhea in Infants." Paper by Dr. Joseph Casper, "Infantile Paralysis." These two excellent papers received a well-merited general discussion.

September Meeting

Dubois County Medical Society met in special session at the city hall in Huntingburg, Tuesday, September 12. Minutes of previous meeting were read and approved. In the absence of the president and vice president, Dr. Edward G. Lukemeyer acted as chairman of the meeting. Report of the centennial parade committee. This committee had decided on one of two courses: either have a float to represent the society or the individual members decorate their automobiles and enter in a body. After a lengthy discussion the latter was decided on. On motion by Dr. Bigham it was decided that each member report to Dr. McKinney at least two days before the parade whether or not he expected to enter, so that necessary reservations could be made.

The circular letter of the American Red Cross was read. On motion by Dr. J. P. Salb, it was decided that the society appoint a Red Cross committee. The secretary was appointed a delegate to the meeting at Fort Wayne. The two essayists being absent, the meeting was adjourned.

H. M. BAKER, Secretary.

ELKHART COUNTY MEDICAL ASSOCIATION

April 6, 1916

Meeting called to order at 8:15 by President Eby in Drs. Kreider's offices, Goshen. Minutes of March meeting read and approved.

Communication from Dr. W. S. Campbell, Chicago, read by secretary. Motion made and carried that this society express its approval of the statements made by Dr. Campbell by instructing its delegate to the meeting of the Indiana State Medical Association to back this sentiment. Secretary instructed to write Dr. Campbell of this action.

Motion made and carried that the secretary write a letter of appreciation to Drs. Allen and Strickland for their favors to the society on March 2, 1916.

Motion made and carried that the Elkhart County Medical Association goes on record as being in favor of child welfare movement.

Motion made and carried that the president, vice president and secretary form a committee to pass on papers read before this society each year and to select and recommend, to be read before the State Association meeting, the paper or papers of greatest merit.

The secretary was instructed to collect \$2 from essayists who fail to appear on program at time elected and designated.

Motion made and carried that the president appoint a committee of three, one member from Elkhart, one from Goshen and the chair ex officio to report at next meeting as to what may be done toward making next year's program a University Extension Course.

Paper, "Spina Bifida," Dr. M. D. Price, Nappanee. Malformation due to defective development in spinal canal and vertebral laminae and occurring at any point in cervical, dorsal, lumbar and sacral regions. When occurring in lower part of spine, it is accompanied by paralysis, bowel and bladder disturbances and hydrocephalus. Rupture of the sac brings on meningitis, high fever, collapse and convulsions; when the tumor is covered with skin it may grow 20 inches in circumference. Varieties: 1. Meningocele, a translucent tumor with no spinal fissure. 2. Meningomyelocele, paralysis of sphincters and lower extremities, umbilication of the center of the tumor and a bony fissure with large central cicatrix. 3. Syringomyelocele, presence of hydrocephalus, a compressible, elastic tumor and increased in size by pressure on anterior fontanelle and by child's crying. 4. Spina bifida occulta, tumor protrudes through fissure in bodies of vertebrae into the cavity of thorax, abdomen or pelvis.

Simple meningocele gives best prognosis. Meningomyelocele with paralysis and hydrocephalus usually hopeless. Hydrocephalus may follow operation.

CASE 1.—Baby girl born April 1, 1915. Lumbar meningocele. Thin membrane, size of walnut. Slow rupture about the third week. As outflow of fluid continued, symptoms obtaining were nervousness, alternating depression and bulging of the anterior fontanelle, fretting, irregular respiration with marked pallor, rapid, irregular pulse and subnormal temperature. Finally slow paralysis and death after five months.

CASE 2.—Babe showing same location of tumor and same symptoms. Rupture of sac was sudden and spontaneous and babe died four days thereafter with extremely high fever and in convulsions.

CASE 3.—Babe born Feb. 6, 1912, in practice of Dr. Schamahorn. Double tumor at site of last dorsal vertebrae. On tenth day puncture of tumor and withdrawal of 1½ ounces of cerebrospinal fluid. Shock followed but babe rallied. Brace applied, form of half cylinder, extending from neck to hips, well padded and laced. While this was in position tumor stayed flat, but filled up when brace was removed. On the twenty-first day babe was operated on. Eleven mattress sutures taken to control hemorrhage and spinal fluid. The smaller tumor was removed and both layers of the larger tumor were fastened over the stump of the smaller. Again profound shock, but after forty-eight hours babe rallied and in four months the wound was healed. Now at age of 4 child weighs 45 pounds, is healthy, no deformity.

CASE 4.—Premature, stillborn fetus, hydrocephalus and spina bifida in midlumbar region, size of hulled walnut and thin membranous covering. Talipes right foot. Father's sister had a babe with hydrocephalus, spina bifida and talipes.

Treatment: Excision of sac under best conditions possible. Paracentesis dangerous. Until time for operation protect tumor from pressure with suitable brace and dressings.

DISCUSSION

Dr. D. L. Miller, Goshen: Cited case which lived four weeks with lumbar spina bifida size of small coconut.

Dr. D. L. Dreese, Goshen: Reported case of spinal tumor on back of neck, 2½ by 2½ inches. Appreciates report of success in any case of spina bifida.

Dr. I. J. Becknell, Goshen: Places pads around tumor to avoid pressure. Cited case from whose tumor fluid was withdrawn several times with beneficial result.

Dr. E. E. Ash, Goshen: Two cases in past year, both in lumbar region. Both should have been operated on. They looked well and were fat. No integument over tumors. Suddenly there developed high fever, convulsions and death. Operation should have been done in first ten days of life.

Dr. M. K. Kreider, Goshen: Several cases, some stillborn. In one he withdrew fluid at 7 months and child died in one week. Operation inadvisable unless done early.

Dr. A. C. Yoder, Goshen: Reported case of child 8 years old with tumor in lower lumbar region size of grapefruit. These cases differ according to the tissues involved. In this child more than the meninges are involved. Child is paralyzed and walks with crutches. Mentally perfect. Constipation a constant finding. Dr. Yoder injected iodine and K. I. mixture when child was several months of age.

Dr. M. D. Price (closing): Early operation is the right treatment. Chiropractors, ignorant of the real and serious nature of these cases, send word to parents that they can cure.

Adjourned.

JAMES A. WORK, JR., Secretary.

May 4, 1916

Called to order at 8:30 by President Eby in office of Dr. H. O. Staufft, Elkhart. Minutes of April meeting read and approved. Dr. W. B. Page, Middlebury, elected chairman pro tem.

Paper, "Hypertensive Cardiovascular Disease," Dr. S. T. Miller, Elkhart.

Paper, "Functional Heart Disease," Dr. M. K. Kreider, Goshen.

Paper, "Maternal Impressions," Dr. J. C. Mast, Elkhart.

DISCUSSION

Dr. W. A. Stauffer, Elkhart: Overindulgence cause of high blood pressure.

Dr. G. W. Spohn, Elkhart: Blood pressure should be taken more frequently. Roaring in ears not always due to high blood pressure, but occasionally cerumen in ear. Majority of cases with high blood pressure have a kidney condition. Does not believe person can get much reduction in blood pressure by K. I. or digitalis. Most important thing is rest and diet.

Does not believe in medicines for this condition. Coarse vegetables.

Dr. G. W. Grossnickle, Elkhart: Believes in venesection in arteriosclerosis. Cites large doses of nitrites given by some internists. Uses large doses of K. I. and nitrites. Gives many baths and limited diet. Cerebral hemorrhage most frequent after heavy meal.

Dr. E. M. Hoover, Elkhart: Does not agree with essayist that venesection does no good in nephritis with high blood pressure. Venesection does not immediately reduce blood pressure. Would be a dangerous procedure. High blood pressure is a symptom. Interstitial nephritis most frequent cause of high blood pressure. Often high blood pressure is only sign of nephritis.

Dr. S. O. Barwick, Elkhart: Believes there is only one form of nephritis—interstitial. Wherever high blood pressure, look for nephritis. Functional disturbances of heart due to gas in blood where infection is not cause. Believes in prepotent power of parentage. Spotty interstitial nephritis.

Dr. S. T. Miller, Elkhart (closing): Chronic interstitial nephritis; blood pressure high. Urine low specific gravity. Solids retained.

Committee on University Extension Course reported. Report accepted and committee continued.

Motion made and carried that committee determine cost of course. Amendment carried that committee act with officers of society in deciding whether plan is feasible and in arranging same.

Motion made and carried that annual dinner be held at Brunjes' Park; spring chicken and fish at 5 p. m. Chairman to appoint committee on arrangements.

Adjourned.

PAUL B. WORK, Secretary, pro tem.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1916, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

SOLUTION OF HYPOPHYSIS-SQUIBB.—A sterilized, aqueous solution of the water-soluble active principles of the posterior lobe of the pituitary bodies of cattle, free from chemical preservatives and physiologically standardized. It has the properties of the pituitary gland, as described in New and Nonofficial Remedies, 1916. E. R. Squibb & Sons, New York (*Jour. A. M. A.*, Sept. 2, 1916, p. 745).

BENZIDINE.—In medical practice benzidine is used for the detection of occult blood. In the presence of hydrogen peroxid and acetic acid, benzidine is changed to a deep purple compound by the action of blood. The test is said to detect blood in a dilution of 1 in 300,000.

BENZIDINE-MERCK (FOR BLOOD TEST).—This complies with the standards prescribed for benzidine, N. N. R. Merck and Co., New York (*Jour. A. M. A.*, Sept. 16, 1916, p. 879).

OCCULT BLOOD TEST (DUDLEY ROBERTS).—This consists of tablets each containing 5 grains of a trituration of benzidine, 1 part, and sodium perborate, 20 parts, and glacial acetic acid (supplied in boxes containing 100 tablets in vials, and a bottle of glacial acetic acid). A tablet is treated with a weak solution of the material to be tested and a drop of acetic acid added, a greenish blue color indicates the presence of blood. E. R. Squibb & Sons, New York (*Jour. A. M. A.*, Sept. 16, 1916, p. 879).

MERCURIAL OIL.—A mixture containing from 40 to 50 per cent. of metallic mercury in an oily base. The mercury is in a finely divided state and of a consistence which permits its intramuscular injection by means of a proper syringe at room temperature. The degree of subdivision of the mercury should be indicated for each brand of this product. Mercurial oil is used as a means of obtaining the systemic effects of mercury. Cumulative effects should be carefully watched for.

MERCURIAL OIL-NATIONAL PATHOLOGICAL LABORATORY.—A mixture of equal weights of mercury and lanolin obtained by triturating the constituents until mercury globules are no longer macroscopically visible. It is marketed in graduated syringes ready for use and containing 2 Cc. National Pathological Laboratories, Chicago (*Jour. A. M. A.*, Sept. 23, 1916, p. 953).

LIQUID PETROLATUM-SQUIBB, HEAVY (CALIFORNIAN).—It is made from Californian petroleum and is claimed to be composed chiefly of hydrocarbons of the naphthene series. A brand of liquid petrolatum complying with the U. S. P. standards for liquid petrolatum and claimed to be superior to liquid petrolatum, U. S. P. E. R. Squibb & Sons, New York (*Jour. A. M. A.*, Sept. 23, 1916, p. 953).

THROMBOPLASTIN-SQUIBB.—A solution of brain extract complying with the standards for solution brain extract, N. N. R. It is marketed in 20 Cc. vials. E. R. Squibb & Sons, New York (*Jour. A. M. A.*, Sept. 23, 1916, p. 953).

CHLORAZENE.—Chlorazene (sodium para-toluene-sulphochloramine) is an active germicide acting much like hypochlorites, but being less irritating. Like the hypochlorites it has the advantage over mercuric chloride, zinc chloride, etc., in that it does not coagulate or precipitate proteins, such as blood serum. Chlorazene is reported to be practically non-toxic. The Abbott Laboratories, Chicago (*Jour. A. M. A.*, Sept. 30, 1916, p. 1021).

PROPAGANDA FOR REFORM

THE U. S. PHARMACOPEIA, IX.—The ninth revision of the U. S. Pharmacopeia became official Sept. 1, 1916. It is a book of standards for drugs, but it is not a book of standard drugs. The pharmacopeia includes substances which have been shown to be inert like the hypophosphites, complex and obsolete mixtures like the compound syrup of sarsaparilla, and drugs which have been tried and found wanting like saw palmetto berries. There is one great advantage in specifying U. S. P. preparations: to do so, is to invoke legal standards of identity and purity. The only way to be sure of obtaining substances of therapeutic efficiency, however, is to exercise discrimination; the pharmacopeia is no guide to therapeutically valuable drugs (*Jour. A. M. A.*, Sept. 2, 1916, p. 750).

Our advantages make us headquarters for the organo-therapeutic products

Corpus Luteum—True Substance. Powder; Tablets, 2-gr. and 5-gr. Capsules.

Pituitary Liquid—is physiologically standardized and is free from preservatives. 1 c. c. ampoules, boxes of six.

Pineal Substance—Powder and Tablets, 1-20 grain.



Thyroids—Standardized. Powder; Tablets, 2 gr., 1 gr., 1-2 gr., 1-4 gr.

Parathyroids—Powder and Tablets, 1-20 grain.

Pituitary, Anterior—Powder and Tablets, 2 grain.

Pituitary, Posterior—Powder and Tablets, 1-10 gr.

Extract of Red Bone Marrow

Histogenetic — Hematogenetic

RECOMMENDED in all cases where there is a paucity of red corpuscles—the anemias, chlorosis, marasmus, rachitis, tuberculosis, malarial cachexia and malnutrition generally.

Extract of Red Bone Marrow aids in reconstruction after hemorrhage and surgical operations.

ARMOUR AND COMPANY
CHICAGO

Extract of Red Bone Marrow is very palatable and if given well diluted is always borne.

M-42

THE NEW NATIONAL FORMULARY.—The National Formulary, 4th edition, became official September 1. It is published by the American Pharmaceutical Association. The preface says frankly: "The scope of the present National Formulary is the same as in previous issues, and is based on medical usage rather than on therapeutic ideals. The committee consists entirely of pharmacists, or of men with a pharmaceutical training, and it cannot presume either to judge therapeutic practice or follow any particular school of therapeutic practice. The question of the addition or deletion of any formula was judged on the basis of its use by physicians and its pharmaceutical soundness. The considerable use by physicians of any preparation was considered sufficient warrant for the inclusion of its formula in the book, and a negligible or diminishing use as justifying its exclusion." The National Formulary contains a large number of formulas for preparations which in the main are complex and superfluous. From the pharmacist's point of view, the book is a valuable one. Physicians who have a scientific training in the pharmacology of drugs will not want it; others will be better off without the temptations offered by its many irrational formulas (*Jour. A. M. A.*, Sept. 2, 1916, p. 764).

THE HYPOPHOSPHITE FALLACY.—The Council on Pharmacy and Chemistry reports that the introduction of hypophosphites into medicine was due to an erroneous and now discarded theory as to the cause of tuberculosis and the properties of the hypophosphites. After a review of the literature and in view of experimental work the Council concludes that there is no warrant for the use of hypophosphites in medi-

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Optical equipment of every description—Prescription grinders
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cine, unless it be to secure the calcium effect from calcium hypophosphite and the ammonium action of ammonium hypophosphite. The Council reviews the claims made for the following and declares them ineligible for New and Nonofficial Remedies: Fellows' Syrup of Hypophosphites, Fellows Medical Mfg. Co., Syrupus Roborans (Syrup Hypophosphites Comp. with Quinin, Strychnin and Manganese), Arthur Peter and Co., Schlotterbeck's Solution Hypophosphites of Lime and Soda (Liq. Hypophosphitum, Schlotterbeck's), The Schlotterbeck and Foos Co., Robinson's Hypophosphites, Robinson-Pettet Company, Eupaptic Hypophosphites, Nelson, Baker and Co., McArthur's Syrup of the Hypophosphites Comp. (Lime and Soda), The McArthur Hypophosphite Co. Though in general no therapeutic claims so far as the hypophosphites are concerned are made for the following, the Council held their use irrational and directed their omission from New and Nonofficial Remedies which now describes them: Borchardt's Malt Olive with Hypophosphites, Maltzyme with Hypophosphites, Maltine with Hypophosphites and Maltine with Olive Oil and Hypophosphites (*Jour. A. M. A.*, Sept. 2, 1916, p. 760).

PULVOIDS CALCYLATES.—The Drug Products Co., Inc., New York, markets tablets under the name "Pulvoids Calcyates 5 grain," with claims as to composition which, though vague, suggest that the product is a mixture of calcium salicylate and strontium salicylate. The Council on Pharmacy and Chemistry found that there was no evidence that a mixture of the salicylates of calcium and strontium is superior to sodium salicylate and declared Pulvoids Calcyates ineligible for New and Nonofficial Remedies because unwarranted therapeutic claims were made for the mixture; because the name does not describe the composition; and because the mixture is an unessential modification of an established remedy (sodium salicylate) (*Jour. A. M. A.*, Sept. 9, 1916, p. 827).

SECRETAGEN.—The Council on Pharmacy and Chemistry has reported that commercial secretin preparations examined (Secretogen and Ducdenin) contained no secretin and also that secretin is inert when given by mouth. While practically admitting the correctness of the Council's findings, the manufacturer of Secretogen (The G. W. Carrick Co.) in a letter to the Council sets forth the company's claims for secretogen on a new and altogether improbable basis. Since the arguments are purely speculative, the Council reaffirms its previous action declaring this preparation ineligible for New and Nonofficial Remedies (*Jour. A. M. A.*, Sept. 9, 1916, p. 828).

ARSENOBENZOL AND DIARSENOL.—The Council on Pharmacy and Chemistry reports that it found Arsenobenzol, made by the Dermatological Research Laboratories, Philadelphia Polyclinic, Philadelphia, and Diarsenol, made by the Synthetic Drug Company, Toronto, Canada, substantially identical with salvarsan in composition, and equal to salvarsan in therapeutic efficiency. The Council reports that these products have not been admitted to New and Nonofficial Remedies because there is a doubt as to the legality of their sale in the United States. But for this doubt as to their legal status, both products would be entirely eligible to N. N. R. (*Jour. A. M. A.*, Sept. 16, 1916, p. 879).

SULFURYL MONAL.—According to the label these "pastilles" contain "Sulfuryl (combined polysulphurets)" which "liberates nascent sulphuretted hydrogen." The A. M. A. Chemical Laboratory reports that the tablets had the taste of licorice extract, an odor of hydrogen sulphide and that a tablet liberated about 6 c.c. hydrogen sulphide. The Council on Pharmacy and Chemistry reports that sulphides are practically ignored in modern textbooks and declared Sulfuryl Monal ineligible for New and Nonofficial Remedies because unwarranted and dangerous therapeutic claims were made for it (*Jour. A. M. A.*, Sept. 16, 1916, p. 894).

BI-TARIDE TABLETS.—These are dark brown tablets with a strong tarry odor, sold by the Germicidal Products Corporation, New York. The Council on Pharmacy and Chemistry reports that the preparation was found ineligible for New and Nonofficial Remedies because the composition of the tablets is essentially secret, because the therapeutic claims made are exaggerated and an invitation to the public to depend on them in serious diseases and that the combination of coal tar derivatives and boric acid (said to be constituents of the tablets) is irrational (*Jour. A. M. A.*, Sept. 16, 1916, p. 895).

GLYCO-THYMOLINE AND POLIOMYELITIS.—The manufacturers of Glyco-Thymoline are circularizing physicians, advising dependence on Glyco-Thymoline as a preventive against poliomyelitis. A report of the Council on Pharmacy and Chemistry pointed out that this preparation is simply a weak antiseptic, so feeble that even in full strength it does not kill *Staphylococcus aureus* in four hours and is of little, if any, greater therapeutic value than sterile salt solution (*Jour. A. M. A.*, Sept. 16, 1916, p. 895).

NAPHTHALENE FOR AUTOMOBILES.—The A. M. A. Chemical Laboratory reports that "Inajiffi" tablets are pure, or nearly pure naphthalene. The tablets are to be added to gasoline for automobiles, etc. The increase of energy produced by the addition of the tablets is probably too slight to be appreciable. Even if the addition of the small quantity advised by the dealers of "Inajiffi" did give an appreciable augmentation of energy, naphthalene might be bought in the form of moth balls (*Jour. A. M. A.*, Sept. 16, 1916, p. 897).

MARK WHITE GOITER TREATMENT.—The Council on Pharmacy and Chemistry reports that Mark White Goiter Serum and Mark White Iodized Oil, submitted by the Mark White Goiter Serum Laboratories, Chicago, was not admitted to New and Nonofficial Remedies because the sale in interstate commerce of the "serum" has not been authorized by the Treasury Department, because the statements regarding composition are indefinite and contradictory, because the therapeutic claims were not substantiated and because the routine treatment of goiter is irrational. Mark White is a veterinarian and, in association with various physicians, has exploited his treatment, at one time called "Goiterine" from different cities. In Chicago he has been associated with Dr. Rachel Watkins (*Jour. A. M. A.*, Sept. 23, 1916, p. 967).

THE THERAPEUTIC VALUE OF THE GLYCEROPHOSPHATES.—In view of the very convincing evidence that the glycerophosphates do not possess the therapeutic properties attributed to them and are not superior to ordinary phosphates, the Council on Pharmacy and

Chemistry examined the following proprietary glycerophosphate preparations: Tonols (Schering and Glatz) comprising Iron, Lime, Lithium, Magnesium, Manganese, Potassium, Quinine, Sodium, and Strychnine "Tonols," Duotonol Tablets, Triotonol Tablets, Quar-tonol Tablets, Sextonol Tablets, Phosphorcin Compound (Eimer and Ahmend), Robinol (John Wyeth and Bro.), Phosphoglycerate of Lime (Fougera and Co.), Elixir Glycerophosphates, Nux Vomica and Damiana (Sharp and Dohme). The Council reports that unwarranted therapeutic claims are made for all of these preparations. In addition the composition of Robinol and Elixir Glycerophosphate, Nux Vomica and Damiana is semi-secret, and Tonols, Phosphorcin Compound and Robinol bear objectionable names (*Jour. A. M. A.*, Sept. 30, 1916, p. 1033).

KORA-KONIA.—Kora-Konia is a dusting powder advertised to the medical profession by the "House of Mennen." It is claimed to be indicated in the treatment of acne, dermatitis, eczema, intertrigo, etc., and is said to possess germicidal qualities. The A. M. A. Chemical Laboratory reported that the powder essentially consists of talcum and zinc stearate in about equal proportions to which small quantities of magnesium carbonate and boric acid have been added. The Council on Pharmacy and Chemistry believes that the extravagant and unwarranted therapeutic claims made for this simple dusting powder are likely to lead the public, as well as the thoughtless physician, to place unwarranted confidence in it and therefore declared Kora-Konia ineligible for New and Nonofficial Remedies (*Jour. A. M. A.*, Sept. 30, 1916, p. 1034).

BOOK REVIEWS

THE CLINICS OF JOHN B. MURPHY, M.D., at Mercy Hospital, Chicago, Volume V, Number 4, August, 1916. Published bi-monthly by W. B. Saunders Company, Philadelphia and London.

This clinic may serve as a good illustration of the abundance and variety of surgical work the author of these clinics did just before his death. These clinics will be treasured by all who have them, not only for their intrinsic worth but as a remembrance of one of the greatest exponents of surgery of not only our own generation but of any era in medicine.

GYNECOLOGY. VOLUME IV OF THE PRACTICAL MEDICINE SERIES FOR 1916. Edited by E. P. Dudley, A.M., M.D., Professor of Gynecology, Northwestern University Medical School; Gynecologist to St. Luke's and Wesley Hospitals, Chicago, and Herbert M. Stowe, M.D., Assistant Professor of Obstetrics, Northwestern University Medical School; Attending Gynecologist to Cook County Hospital. Cloth, \$1.35. Price of series of ten volumes, \$10.00. The Year Book Publishers, Chicago.

The authors state in their introduction that the review of this subject for the present year is confined mostly to the literature contributed by American writers. The same may be said of practically every subject in medicine except that of military surgery. The reviewers give in this volume a brief but splendid summary of the progress in gynecology made during the year. Their illustrations are of the usual degree of excellence.

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VOLUME V OF THE PRACTICAL MEDICINE SERIES FOR 1916. Pediatrics. Edited by Isaac A. Abt, M.D., Professor of Pediatrics, Northwestern University Medical School, Attending Physician Michael Reese Hospital, with the collaboration of A. Levinson, M.D., Orthopedic Surgery, edited by John Ridlon, A.M., M.D., Professor of Orthopedic Surgery, Northwestern University Medical School, with the collaboration of Charles A. Parker, M.D. Cloth, \$1.35. Price of series of ten volumes, \$10.00. The Year Book Publishers, Chicago.

About three-fourths of this volume is taken up by the review of pediatrics and the remainder by the review of orthopedics. The general physician or the specialist who wants to know what has been done in these branches during the past year will find in this volume the information he desires. Each of the reviews is given briefly but quite fully. Those who follow these reviews from year to year look forward to their appearance with a great deal of interest.

THE MEDICAL CLINICS OF CHICAGO, Volume 2, Number 1, July, 1916. Published bi-monthly by W. B. Saunders Company, Philadelphia and London. Paper. Price per year, \$8.00.

This volume contains a splendid talk by Arthur R. Edwards on "The Use of Digitalis"; two good clinics on diabetes, one by Tice and the other by Solomon Strouse; an excellent talk by Portis on "Vomiting"; an admirable lecture by Abt on "Feeding the Normal Baby—Breast Feeding"; another by Brophy on "Oral Infections"; and yet another by James T. Case on "The Principles of Fluoroscopy of the Stomach." Besides all these some very interesting cases are presented and discussed by Hamill, Mix, and Williamson in their usual interesting and instructive manner. Surely no general physician can afford or ought to miss a volume so full of practical clinical instruction as this one.

PROGRESSIVE MEDICINE, Vol. XIX, No. 3 (September, 1916). Edited by Hobart Amory Hare, M.D., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College. Assisted by Leighton F. Appleman, M.D., Instructor in Therapeutics, Jefferson Medical College. Paper, \$6.00 per annum. Lea & Febiger, Publishers: Philadelphia and New York.

Nearly one half of this volume is taken up by Davis with his review of obstetrics. In the 177 pages comprising that contribution can be found much of interest to those interested in this subject.

An excellent review of diseases of the thorax and its viscera, including the heart, lungs, and blood vessels, contributed by Ewart makes up the first hundred pages of this volume. Then follows Gottheil's review of dermatology and syphilis. It is brief but splendid. The concluding article of this issue is Spiller's review of diseases of the nervous system. Neurosyphilis again is here given the attention it deserves.

This volume is one that ought to be of distinct benefit to every general physician.

VENESECTION. A Brief Summary of the Practical Value of Venesection in Disease, for Students and Practitioners of Medicine. By Walton Forest Dutton, M.D. Illustrated with several text engravings and three full-page plates, one in colors. Philadelphia: F. A. Davis Company, Publishers, 1916.

There is a great difference of opinion at present whether venesection itself can really bring about the remarkable therapeutic effects claimed for it. The

author of this book, is, perhaps, overenthusiastic in his claims. The ordinary textbook on therapy and therapeutic methods contains practically all the knowledge on venesection the general "practician" needs or wants to know. It is doubtful whether a monograph of over 200 pages such as this one is really needed.

However, it must be stated that what the author has to say in presenting this subject is well worth reading and knowing. One can not get anything new in this work, but what is already known is given in a clear and concise manner. To those who are not yet familiar with the subject of venesection this book can be recommended as one well worth having.

PRACTICAL MASSAGE AND CORRECTIVE EXERCISES. By Hartvig Nissen, President of Posse Normal School of Gymnastics; Superintendent of Hospital Clinics in Massage and Medical Gymnastics. Revised and enlarged edition of the author's "Practical Massage in Twenty Lessons," with many additions. With 68 original illustrations, including several full-page half-tone plates. Philadelphia: F. A. Davis Company, Publishers, 1916.

The more the general physician knows about massage the better will be his therapeutic results in many cases. Indeed, the day has come when he must know quite a good deal about the treatment of certain diseases and disorders by massage and corrective exercises. The average medical man lacks this knowledge, and without this knowledge is handicapped in his treatment of those conditions where massage properly applied would be helpful. Physicians will certainly have to devote more of their attention to the subject. Therefore a book such as this by one with the vast practical experience that this author has enjoyed is most welcome. The subject is presented in an admirable way. The author knows how to present the subject so that the uninformed reader will get as much out of it as possible.

DIAGNOSIS AND TREATMENT OF SURGICAL DISEASES OF THE SPINAL CORD AND ITS MEMBRANES. By Charles A. Elsberg, M.D., F.A.C.S., Professor of Clinical Surgery at the New York University and Bellevue Hospital Medical College. Octavo of 330 pages, with 158 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, \$5 net.

This writer has done so much to advance our knowledge of surgical diseases of the spinal cord and its membranes that any new work on this subject that he has to offer will be welcomed as a real contribution to modern surgery.

He presents the subject in three parts. Part I gives the anatomy and physiology of the spinal cord and the symptomatology of surgical spinal disease. Part II describes operations on the spine, spinal cord and nerve roots. Part III discusses the surgical diseases of the spinal cord and membranes, and the treatment of those diseases.

To surgeons a book of this kind by a worker of the reputation that Elsberg has established in this special field ought to be invaluable. But the book contains also a great deal of information that every practicing physician ought to have.

The illustrations are mostly original. They were made from specimens, dissections, and from sketches obtained at the operating table. In quality they are of the highest grade of excellence.

This textbook is a credit not only to the author but to American surgery as well.

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October 1, 1916.



THE JOURNAL

OF THE

Indiana State Medical Association

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ISSUED MONTHLY under Direction of the Council

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NUMBER 11

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THE INDIANA STATE MEDICAL ASSOCIATION

Next Annual Session, Evansville, September 26, 27 and 28, 1917

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DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION

For one year (term expires December 31, 1917); Joseph Rilus Eastman, Indianapolis, and Albert E. Bulson, Jr., Fort Wayne. Alternates: L. L. Whitesides, Franklin, and W. H. Stemm, North Vernon. For two years (term expires December 31, 1918) C. H. Good, Huntington; Miles F. Porter, Fort Wayne. Alternates, C. A. White, Danville, and A. M. Hayden, Evansville.

COUNCILORS

Chairman, W. R. Davidson, Evansville.

DISTRICT	TERM EXPIRES	DISTRICT	TERM EXPIRES
1st—W. R. Davidson, Evansville.....	December 31, 1917	7th—W. B. Kitchen, Indianapolis.....	December 31, 1917
2d—J. B. Maple, Shelburn.....	December 31, 1918	8th—G. W. H. Kemper, Muncie.....	December 31, 1918
3d—Jos. D. Heitger, Bedford.....	December 31, 1919	9th—F. A. Tucker, Noblesville.....	December 31, 1919
4th—W. H. Stemm, North Vernon.....	December 31, 1917	10th—O. B. Nesbit, Gary.....	December 31, 1917
*5th—Joseph H. Weinstein, Terre Haute.....	December 31, 1915	11th—G. G. Eckhart, Marion.....	December 31, 1918
6th—O. J. Gronendyke, Newcastle.....	December 31, 1919	12th—E. E. Morgan, Fort Wayne.....	December 31, 1916
		13th—A. C. McDonald, Warsaw.....	December 31, 1917

*No election held in 1915.

COMMITTEES

Announcement of Committees for 1917 will be published later

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THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF INDIANA

ISSUED MONTHLY under Direction of the Council

ALBERT E. BULSON, Jr., B.S., M.D., Editor and Manager

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VOLUME IX

FORT WAYNE, IND., NOVEMBER 15, 1916

NUMBER 11

ORIGINAL ARTICLES

ADDRESS: MEDICAL ACTIVITIES IN INDIANA *

GEORGE F. KEIPER, M.D.

President of the Indiana State Medical Association

LAFAYETTE

A year ago the House of Delegates of the Indiana State Medical Association conferred on the present incumbent the honor of presiding over its work, plans and destiny. In accepting this honor, which I very much appreciate, I distinctly stated that I regarded the office as one of very great responsibility, but also that in addition to these two phases I welcomed it as a great opportunity of being, more than ever, serviceable to the profession which I dearly love and whose art I endeavor to practice zealously.

So I have endeavored to meet with my confrères in the different councils or district medical society meetings, and when ample notice was given me, and when there were no conflicts in the time of holding these meetings, I have been present to participate in the scientific proceedings and the succeeding festivities of these meetings. According to the constitution and by-laws this is one of the duties of the president of this Association.

These little journeys have taken me from one end of the state to the other, and have been most delightful, not only in the new associations formed and acquaintances made, but also in viewing beautiful spots of scenery in Indiana the like of which I had not even dreamed. How true it is that we have journeyed far and wide in this land of ours and perhaps have crossed the oceans in search of new sights, pleasures

and knowledge, only to return to our native land and state to find that it is full of beauty, not only topographically, but likewise in its population. Let me recommend to my successors in this office of opportunity that they do likewise and have the same pleasures which have fallen to my lot, and get that new knowledge that must come from association with the brilliant minds of our Indiana profession. Remember that one never learns anything new by talking to himself.

Permit me here to emphasize the importance of the meetings of the councilor district medical societies.

COUNCILOR DISTRICT MEDICAL SOCIETIES

Not all the councilor districts have held meetings the past official year, and in attempting to stimulate the necessary interest in the delinquents your president has been met with the reply that we already have too many medical meetings to attend, and that the meetings of the county medical society and of the State Medical Association are amply sufficient for the average medical man. Yet the liveliest men in the profession not only attend all these components of the State Medical Association, but also go to the annual meetings of the American Medical Association and derive profit by such attendance. Many of these also belong to societies dealing with the specialties and attend the meetings of those societies.

The statistics gathered by our secretary show that only one third of our membership in the county medical societies will be found in attendance on the average meeting of that society. Furthermore, only one third of our membership is willing to undergo the discipline of preparing and reading papers; only one third who are willing to give after freely receiving the work of others in their articles on the problems of medicine. This is the ethics of authorship: freely ye have received, freely give. The late

* Presidential address delivered at the Fort Wayne Session of the Indiana State Medical Association, September, 1916.

President Harper of the University of Chicago once remarked that if he wished to know all about a subject he wrote a book about it. That is, he was able to write the book because he learned all about that subject before he wrote it.

Two thirds of our membership are nonparticipants in attendance at the meetings of the county medical societies, as well as in their scientific programs. Let us not forget that we are a body of scientific men and women, trained by scientific thought to the scientific method and spirit, and shall we not deport ourselves as such by attendance at the scientific programs of our county society meetings? Evidently the two thirds must be reached. The county medical society is not yet attractive. Perhaps the district medical society can help, and help it does, I am certain from the information gathered in these journeys.

There is a place for the district medical society meeting and a large one too. We need to get away from our environment, the ruts of practice, as it were, once in a while, and even though the distance traveled to a district medical society meeting is not great, yet it is sufficient to show the medical man or woman that the confrères of the other counties of the district do things worthy of emulation.

I was especially charmed by attendance on the meeting of the Fourth Councilor District at Aurora. When I received the invitation to attend that meeting I must confess that I did not know where Aurora is, so lame was my knowledge of the geography of our native state. But when I arrived to attend the meeting I found a beauty spot nestled in the hills and bluffs of southern Indiana and on the Ohio river, a perfect gem set perfectly in rugged surroundings of natural beauty. A large attendance greeted the efforts of the indefatigable officers, and a splendid scientific program was rendered. But what pleased me most was this: In the discussion which followed an excellent paper on the value of vaccine therapy as applied to the practice of medicine, the leaders in the discussion were the elders, men who graduated in medicine before bacteriology was taught scientifically or before it was taught at all, men who, though advanced in years, yet during all those years of busy lives had kept abreast with the advances made in the science of bacteriology and were thoroughly informed in all the phases of that science and its practical application to the practice of medicine. All hail to the elders of our profession who have refused to sink to

the level of the communities in which they settled. Let us take heart that age is no bar to achievement for, with Longfellow in the concluding verses of *Morituri Salutamus*, we may truthfully say:

But why, you ask me, should this tale be told
To men grown old, or who are growing old?
Is it too late? Ah, nothing is too late
Till the tired heart shall cease to palpitate.
Cato learned Greek at eighty. Sophocles
Wrote his grand Oedipus, and Simonides
Bore off the prize of verse from his comperes,
When each had numbered more than four-score years.
And Theophrastus, at four-score and ten
Had but begun his "Characters of Men."
Chaucer at Woodstock with the nightingales
At sixty wrote the Canterbury Tales.
Goethe at Weimar, toiling to the last,
Completed Faust when eighty years were past.
These are indeed exceptions: but they show
How far the gulf streams of our youth may flow
Into the arctic regions of our lives
Where little else than life survives.

But indolent youth will not yield such fruition in old age. One great and besetting sin of our profession is that men and women leave our professional schools splendidly equipped for the practice of medicine to settle in their respective communities and deliberately adopt the common standards and ideals of those communities instead of striving to create a new and healthful atmosphere, professionally, socially and morally. The ephemeral novel, the corpulent newspaper, the salacious picture show we permit to distract us from our real work and purpose, our constant preparation. We neglect our medical societies and literature for them. In the words of Osler, "the killing vice of the young doctor is intellectual laziness." Let us strive to be leaders in our several communities, not servile slaves to useless customs in thought and action.

But to revert to the value of the district medical society meeting, many, I say, go there who do not attend the meetings of the county medical society, and this would justify the existence and continuance of such meetings. At least two of our councilor district societies meet oftener than once a year.

That these meetings be made most helpful, the doctors should take with them their wives and grown-up children. The social side of these meetings is very important to cultivate, and the fulness thereof cannot be attained without the presence of our better halves. I know of no finer ladies anywhere than the wives and sweethearts of our doctors — the women who rejoice in our triumphs, who encourage us when discouraged with our failures, who smooth out

the cares of our ruffled dispositions. It has seemed that the district medical society meetings attended by the ladies have presented the best programs. Somehow or other our ladies put us on our mettle and we accomplish more.

But I would urge better attendance on the meetings of our county medical societies, and better participation in their scientific programs. It is my own personal experience that I never attend a medical society meeting without learning something new or relearning something that I had forgotten, and I am sure that this experience is not unique with me.

THE GROWTH OF THE INDIANA STATE MEDICAL ASSOCIATION

Twenty-five years ago our membership numbered 1,155 in sixty-eight county medical societies. Today we have two and one half times that number of physicians enrolled on our membership list and every county organized but one. This growth is gratifying indeed, for the medical profession is not only better organized but ever so much better equipped for its work. Twenty-five years ago were the days of indiscriminate medical education given by a large number of inferior medical colleges, which fortunately have disappeared from the face of the earth, thanks to the demands for a better medical education. Today the profession of medicine is the best educated of all the learned professions save the Catholic clergy. We are growing in influence, too. There was a time in the old New England towns when the lawyer, the doctor and the minister were always consulted first on the problems confronting the citizenship of those old communities. But law and medicine fell from their high estate to answer calls by a hurried education to what has in these latter days been called a business. Hence we have come to speak of the practice of medicine as a business; it is not how large a practice a doctor has, but rather how much business does he do. This term should never have been applied to the work of a learned profession. Yet I would not have the business side of our profession neglected, for the laborer is worthy of his hire.

We lost the dignity of our calling. But thanks to the demands of these latter days, medicine is once more becoming a profession, a learned profession, a body of scientific men trained by scientific men to scientific thought and practice. Today no one can enter on the practice of medicine without some of the culture afforded by our literary institutions, col-

leges and universities. In contrast to this it is a fact that to enter on the practice of law all that the applicant needs is the recommendation of some friend in the law certifying before some court that the said applicant is possessed of a good moral character. A man can graduate from a barber's chair into the practice of law, and that event is a matter of record. But not so with us. At least six years of preparation in addition to the high school diploma is required before one is qualified, not for the practice of medicine, but rather for the privilege of applying for an examination leading to a license to practice medicine. This is a notable reform that we have accomplished in this fair land of ours, and without any pressure from without, be it said to the credit of the medical profession. We have thus weeded out the unworthy. Yet our profession is overcrowded. Compared with the countries of the Old World, we have too many physicians. What we need is better doctors, men and women, who realize with Plato of old that "education is a life-long business" ending only with death or disability.

How shall we realize on that dictum? by contact with our fellow practitioners either personally in the meetings of the societies or by their writings in the journals or in the books. The personal touch is the best, because the reader imparts to his article a personality which makes his article long to be remembered, and all the more interesting. Hence the importance of attending the meetings of the county medical societies.

COUNTY MEDICAL SOCIETIES

Let us cultivate assiduously that phase of our education, our postgraduate medical education, if you please. Let me urge you to gather at least once a month for your society meeting around the dinner table and partake of food before proceeding to the business of the meeting. Somehow or other there is something in eating together that tends to crowd from our minds those petty jealousies for which our profession has been justly criticized, the pin pricks of practice, petty annoyances which should never have found lodgment in the cells of the cortices of our brains. You will find, as we have found in Tippecanoe county, that the attendance at such meetings is way in advance of the older methods. The members feel better and go away to swear by each other and not at each other. And right here let me interject this bit of advice: If you cannot say anything good of your confrère (not competitor), keep your mouth shut.

CUTTING FEES

In several prominent localities your president has encountered much complaint because of fee-cutting by our practitioners. This is reprehensible, to say the least, for fee-cutting does not bring practice that is profitable in the long run. I know of no method whereby it can be successfully curbed. But have you ever thought of this? The best-equipped men in the practice of medicine dictate their own fees, and good ones too, irrespective of the fees of others. The former are never concerned about fee-cutting. The public is wise after all, and it never refuses to pay for value received. Let us make ourselves indispensable. That means that we shall equip ourselves so as to be as good as the best. That is possible for even the man in country practice; for remember Nicholas Senn laid the foundation for the fame acquired later by his experiments as a country doctor; when there in country practice he perfected his bone plates, which made intestinal anastomosis easier than before, and the dogs necessary for such experimentation do not seem to be any scarcer than in his day. Further, two young men starting practice in a country town have developed the greatest medical and surgical clinic of all the ages. The achievements of the greatest are possible to each and every one of us. Opportunity waits to be seized. Are we willing to undergo the discipline necessary? Fee-cutting is on a par with the reprehensible practice of fee-splitting. The best do neither.

MEDICAL ECONOMICS

To your favorable consideration is commend the work of the committee on medical economics. The officers of this Association granted the committee the sum of \$100 with which to prepare a graphic and pictorial exhibit of its work for exhibition at the last annual session of the American Medical Association at Detroit. Instantly it commanded marked attention, and the exhibit was awarded a certificate of merit by the committee on awards. It ought to be a source of great pride to us that for a second time the Indiana State Medical Association projected its work into that of the American Medical Association. In 1898, under the able direction of Dr. Frank B. Wynn, my predecessor in this office, a pathologic exhibit was prepared for the meeting of the Indiana State Medical Association. So valuable was the exhibit in its wealth of material, suggestion and instruction, that it was ordered to be taken to the session of the American Medical Association

about to assemble at Columbus, Ohio. The exhibit was enthusiastically received, and that great association resolved that such an exhibit should be an annual affair, with Dr. Wynn in charge as director, and thus he has continued to this day. It is indeed a source of great satisfaction that the Indiana State Medical Association has been able to project its work into the future as well as geographically. In other words, the work of this Association has met with marked favor abroad.

Let these two achievements stimulate our ambitions as a state medical association to be of greater service to the whole medical profession whithersoever dispersed, for the eyes of the whole country turn to Indiana for ideas in politics (we are still a pivotal state), in education, medicine and literature. The fact that we have concluded that one medical college is sufficient for 3,000,000 people has set going the idea everywhere that our action thus is worthy of emulation elsewhere.

This State Medical Association should now go on record, favoring such legislation as will give in new buildings, equipment and apparatus the material equipment so necessary for making the medical department of the University of Indiana the best medical college to be found anywhere.

COOPERATION

If we are to shine medically we must work in cooperation. Hence commendation is due the efforts being made in different quarters of our state whereby men working along different lines have banded together to practice medicine with offices surrounding a common waiting room, library and laboratory, thus being able to give the patient all that the modern methods of diagnosis demand. We read in the Scriptures that one shall chase a thousand, but that two shall put ten thousand to flight. In other words, the power of combined effort raises the value of each individual engaged to a power higher than arithmetical and geometrical ratio combined. Hence let us lay aside the weight of jealousies and bickerings that so easily beset us and together let us press toward the mark of the high calling in the practice of rational, scientific medicine. What is possible in Rochester, Minn., is possible in Indiana, provided in every town and city physicians are willing to combine and cooperate, and are further willing to undergo the discipline necessary to produce such a result.

Moreover, our patients are becoming wiser every day. They are reading the syndicate med-

ical articles in the daily papers. These articles are written in the main by able men. As a result the average man or woman has learned to demand a complete examination as an aid to a correct diagnosis, and the patient seems willing to pay the price that must be demanded to secure the desired result. If our combination cannot give it, off he or she goes to the place where a complete examination can be made and we lose in price and prestige. In other words, the waiting room is not the center around which the work of the office must revolve. It is the laboratory. No office or clinic is worthy of the name unless that is true. The test tube, the microscope, the Roentgen-ray machine can help us solve the problems of practice, possible in no other way. Neither are we to forget the value of the postmortem as a means of verifying or rejecting our diagnoses, or as a means of discovering the true cause of disease. It is the duty of our profession to educate the laity to the point where it will be easy to obtain postmortem examinations, now so hard to obtain. Therefore let us be up and doing in our whole duty to the suffering public which we seek adequately to serve. In fact, the doctor's office should be a great laboratory, equipped with all the instruments of precision which capable men know how to use. I plead for hearty, intelligent cooperation as contrasted with the nasty, jealous competition so prevalent among us yet.

LEGISLATION

Attention is directed to the forthcoming session of our general assembly, and the prior elections which make it possible. We must be on our guard against freak legislation which would impair the integrity of our medical practice act, as well as freak legislation which would abridge the rights of physicians to prepare and dispense their own medicines. Our statistics show that fully 90 per cent. of our practitioners dispense their own medicines, and these men and women must be protected in that right. The counter prescribing druggists are organizing to deprive us of that right. The druggist, with one or two years only of preparation, cannot be as well qualified and be as well informed as to the properties of drugs and their proper preparation as the physician who is compelled to give at least six years of study as to their action and preparation.

THE ALL-TIME HEALTH OFFICER

The Indiana State Medical Association should without delay commit itself in favor of

a law making the all-time health officer possible in the counties of our state. The present system of health protection is inadequate to say the least. The physician in active practice cannot serve two masters. It is absurd to attempt to practice curative and preventive medicine at the same time. Hence let us line up behind our state board of health and united go to the next session of the general assembly to favor this law, as well as proper legislation for general health supervision. Without the advent of the all-time health officer further progress in public health work in the state is blocked. Remember that 30 per cent. of our insanity is due to syphilis and 50 per cent more is due to heredity. And what shall we say concerning the other very expensive diseases from which the public needs protection.

CHILD'S WELFARE

Munsterburg remarked some time ago that America did not understand hygiene and child life, and it was possible that she would never learn. He says that the efficiency of the German soldier and German citizen is framed in childhood and not in mature years. In answer to this criticism of our attitude toward the health of the child, prenatal and postnatal, let the Indiana State Medical Association advocate, endorse, and work for a bureau in the Indiana State Board of Health which will devote its energies to the proper development of child life. Such legislation already has been accomplished in the states of Kansas, Ohio, Illinois and Kentucky, which have such divisions in their respective state boards of health. Our children are the hope of the nation's perpetuity. It will be well to keep in mind the old German notion that every baby in the household is worth \$1,000, and to this date I have never been able to purchase one at that price or at any price more than that. We must begin with the child to see that it is born right, fed right and reared right.

POSTGRADUATE WORK IN OUR COUNTY SOCIETIES

Our county medical societies should be the best postgraduate medical schools that we possess. To enlarge their scope of usefulness the state medical associations of Pennsylvania, Maryland, North Carolina, Ohio and Michigan have plans in operation to bring postgraduate instruction right to the various county medical societies. Courses are arranged whereby the younger men connected with teaching institu-

tions go right out to county medical society meetings and there demonstrate the advances made in diagnosis and treatment. Many of our practitioners cannot get away from their work, for financial reasons and otherwise. Hence I would recommend that some such plan be put in operation in our own state medical association. Of course the working of such a plan must be centralized, and that is easy with our organization, by committee or commission. While I am a believer in each medical society developing its program out of its own members, yet I am equally favorable to the scheme proposed above. The county medical society meeting, the district medical society meeting, the annual session of the state medical association, the session of the American Medical Association, and the meetings of the societies given to special lines of work are the great postgraduate medical schools to which every practitioner should give his earnest attention, for thereby he is more likely to keep up to date than by attendance at some postgraduate medical school after he has neglected the real helps in the societies and their scientific work. If we are really desiring to be of the best service to our clientele we will not neglect these opportunities for self improvement. It is a matter of regret to note that on an average but 3.5 per cent. of our membership attend the meetings of the American Medical Association.

AMERICAN MEDICAL ASSOCIATION

The report of its secretary, Dr. Alexander R. Craig, to the last House of Delegates of that Association shows that out of our membership of 2,474 of that date, but 1,147 are members of the American Medical Association by fellowship, and who receive the *Journal*, which is considered to be the best of all the weekly medical journals. In our state, outside our membership, 491 other physicians receive *The Journal of the American Medical Association*. Any practitioner interested thus in high-class medical literature should be persuaded to unite with us and get every benefit that must come from society membership. Such a one is just on the threshold of membership in the Indiana State Medical Association. When we go home let us look up these men and women and offer them membership in our county medical societies.

Nevertheless, but one half of our membership receive *The Journal of the American Medical Association*, to which we all belong because of our membership in the Indiana State Medical Association.

To be strictly up to date one must read both extensively and intensively. By means of *The Journal* we get every week a world-wide survey of medical happenings and of medical literature. It has become fashionable to criticize *The Journal* as being too technical and thus not suited to the needs of the average practitioner. To them who know better this really a compliment for *The Journal*. So I take this opportunity to urge all our members to align themselves by fellowship with this great organization, and this will insure *The Journal* every week. Truly *The Journal* is technical, but not too technical for a profession called learned.

STANDARDIZE OUR HOSPITALS

According to the Directory of the American Medical Association there are in the state of Indiana 192 hospitals of all kinds, served mainly by you who are members of their medical and surgical staffs. What is now needed is that we shall all get together on hospital development and reduce the work therein done to a strictly scientific basis. The American College of Surgeons has offered some suggestions looking to such a result. Yet what it suggests seems crude. Further study and thought is necessary. It will be a great thing if the incoming administration of the Indiana State Medical Association would seriously consider this important question, so far as it relates to our Indiana hospitals, and thus attempt to bring order out of a seeming chaos.

MEDICAL PREPAREDNESS FOR SERVICE IN THE UNITED STATES ARMY AND NAVY

The great war now raging in Europe and the threatened conflict with Mexico have led to the organization of a committee of American physicians (for medical preparedness). This committee is the product of the joint action of our federal government, the American Medical Association, the American Surgical Association, the Congress of American Physicians and Surgeons, the Clinical Congress of Surgeons of North America, and the American College of Surgeons. The purpose of the committee is to organize our "vast civilian medical resources in accord with the comprehensive plan for national defense." Therefore the surgeon general of the United States army desires to greatly increase the number of physicians in the medical reserve corps.

This committee has made arrangements whereby it will lend aid to the work of the Red Cross Society. Hence it is its desire to organize Red Cross hospital units all over this country.

By a proclamation of President Taft, Aug. 22, 1911, the Red Cross Society is an agency for the organization of a reserve for the medical service of the army and navy, and the units organized pass, in time of war, into the medical service of the military forces.

For this state the following committee has been appointed to assist in this movement: Joseph R. Eastman, Charles N. Combs, Charles E. Barnett, S. A. Clark, Miles F. Porter, S. M. Rice, Edwin Walker and George F. Keiper.

It is the patriotic duty of every physician between the ages of 21 and 50 to align himself with this movement and secure the commission in the medical reserve corps of the United States army and navy. Lists are being prepared which contain the names of all physicians who are supposed to possess all the qualifications necessary, and these will be forwarded to the general secretary of the general committee and thereafter to the surgeons general of the army and navy. Thereafter opportunities will be given the men whose names are thereon to enlist in this work and secure the coveted commission in the medical reserve corps of the army and navy. The possession of such a commission is attended with many advantages profitable in the extreme.

Therefore it becomes my patriotic duty to call on all eligible physicians to offer themselves as candidates for these commissions in the medical reserve corps of the United States army and navy and stand ready to lend effective aid to the government in time of stress and war.

THE WORKMEN'S COMPENSATION LAW

The Indiana State Medical Association should be in position further to protect its interests, both collectively and individually, in this law. Hence the appointment of a committee is recommended to investigate the conditions under which the physician is required to render service and secure, if deemed wise, such supplementary legislation as may be needed to protect his interests.

CONCLUSION

This meeting concludes my official year. The honor and responsibility conferred a year ago I now return that they may be conferred on one more worthy to receive them. The work of this office has been immensely enjoyed. As its result the past year has been the most satisfactory year of all the previous twenty-six years of practice, made possible by the kindly consideration given me in the discharge of the duties connected with this office. Give my suc-

cessor the same treatment given me and I am sure that ere another year rolls round, you will find the Indiana State Medical Association more prosperous than ever.

To each individual member of the profession of medicine, inside and outside this state organization, I wish the largest measure of success, materially, mentally and morally.

As we strive for the success, our due, the words of Henry Victor Morgan are quite appropriate:

I hold that man alone succeeds
Whose life is crowned by noble deeds,
Who cares not for the world's applause
But scorns vain custom's outgrown laws:
Who feels not dwarfed by nature's show
But deep within himself doth know
That conscious man is greater far
Than ocean, land, or distant star:
Who does not count his wealth by gold,
His worth by office he may hold,
But feels himself, as man alone
As good as king upon a throne:
Who, battling 'gainst each seeming wrong,
Can meet disaster with a song,
Feel sure of victory in defeat,
And rise refreshed the foe to meet:
Who only lives the world to bless,
Can never fail—he *is* success.

MEMORANDA OF MILITARY SURGERY

JOSEPH RILUS EASTMAN, M.D.
VIENNA, AUSTRIA

(Dr. Joseph Rilus Eastman of Indianapolis received an appointment as chief surgeon of one of the military hospitals at Vienna, Austria, and this letter, which passed both German and English censors, after being enroute nearly four months, is sent for publication in *THE JOURNAL* at the request of the editor.)

Our institution is a modern military hospital situated at the southern margin of the city. It rests on an elevation overlooking the beautiful Wienerwald and in view of the higher mountains at the junction of the Carpathians and the Alps. The air from the mountains is pure and invigorating. Likewise the water piped from the snow mountains is faultless.

Patients are brought to the hospital from the transport trains in automobile ambulances. Carriers bring them first to the large ambulance room. On the arrival of a transport there ensues a lively and most interesting scene. The secretaries secure at once a succinct personal and clinical history of each case while the barbers are clipping off the hair and the whiskers. The cooks come from the kitchen bringing hot

soup and rolls; cognac, wine, beer, and coffee are dispensed with truly Samaritan spirit. The picturesque and amiable chaplain moves about the men with words of comfort and good cheer on his lips and with cigarettes for all. He graciously distributes and lights those for the soldiers himself. All clothing is removed from the wounded and taken to the disinfecting room. Each man is then blanketed and carried to the bath where he is smeared with blue ointment and placed in an individual tub. Even those wearing plaster casts go into shallow tubs with their plaster encased limbs held up out of the water by straps. After the full baths the patients are carried to the dressing rooms where bandages and dressings are removed and minor operative measures carried out.

Infected wounds are irrigated with hydrogen peroxid solution and douched with normal saline and filled with Peru balsam or coated with Miculicz salve (silver nitrate, boric acid and vaseline). After such simple wound treatment, the wounded are taken to the wards for rest in a clean bed before any painful or depressing manipulations or Roentgen examinations are made.

Cases with enormous suppurating surfaces or extensive decubitus are sent to the Eiselberg clinic and placed in water beds. Other badly infected wounds are treated chiefly by wide incision, continuous drop irrigation with Dakin's solution of sodium hypochlorite or continuous immersion in 4 per cent. acetate of aluminum solution and exposure to sunlight. No single agent seems more inimical to bacterial growth than the chemical rays of the sun. Superficial staphylococcus, *B. coli* and contaminating infections such as the several forms of proteus steadily attenuate under graduated exposure to the solar rays and even the streptococcus and gas bacillus infections are distinctly benefited by the sun treatment. The large garden in the rear of the Reservespital 8 is utilized to the utmost for direct exposure of the infected wounds to the sun's rays. Gauze dressings and bandages are dispensed with wherever possible and foreign body reaction is brought to the irreducible minimum. On bright days 90 per cent. of our patients, bedridden or ambulant, are sunning themselves in the garden. Napoleon first expressed a fine appreciation for heliotherapy when he said "disease is in the shadow, its cure is in the sun."

The reserve hospital is the third station back of the lines. First aid is given immediately back of the trenches in the field, the wounded are then carried to the "Etappen" hospitals where

simple and urgent measures such as the application of plaster and starch casts or splints, ligation of bleeding vessels, etc., are carried out. From the "Etappen" hospitals the patients are sent in transport trains to the reserve hospitals for complete and systematic radical treatment. If radical measures, as surgical operations, orthopedic measures or other energetic treatment are not required, the patients are then sent to the homes for the convalescents.

In Reserve Hospital 8, as in all other reserve hospitals, the work consists chiefly in the surgical treatment of nerve and spinal cord and blood vessel injuries and the removal of bullets, hand grenade fragments and shrapnel balls from nearly all parts of the anatomy, including the brain, abdomen, head sinuses, and joints. We receive also a large number of compound and comminuted fractures, nearly all of which are infected.

The necessity of energetic treatment of the infected wounds, which complicate nearly all fractures with the exception of those caused by boulder injuries received in the mountains on the Italian front, makes the use of crustacean appliances such as plaster of Paris coats of relatively small value. Thus in fractures of the humerus with infected open wounds the traction splint of Thomas, made of heavy wire or wood, provides immobilization and extension and at the same time permits of local wound treatment. In thigh fractures the Steiman pin passed through the lower end of the femur provides direct extension and allows the free and convenient treatment of open wounds which is so essential. The Hey-Groves cradle splint for thigh fractures supplements the Steinman pin. Plaster of Paris is, of course, much used even in infected fractures, large defects being left in the cast at the open wounds, these defects being bridged over by metal loops or wire "basket handles."

Good adhesive plaster being scarce, Buck's extension is secured in appropriate cases by gluing Canton flannel to the skin with "Mastisol," made of resin, alcohol, benzine and Venice turpentine.

This glue preparation is also extensively used to draw down the skin over the bone after flapless amputations have been made in cases of gas phlegmon. It is well known that the guillotine or flapless amputation is of value in fighting the serious infections of extremities as in gas phlegmon. We have found a compromise amputation to be of worth in such cases. That is short flaps left quite open afford the

same protection against infection and, of course, do not entail the long convalescence consequent on the guillotine amputation recommended several years ago by Van Buren Knott and popularized in this war by Fitzmaurice Kelly.

The Zinkleinverband, a modification of the Unna paint boot, is useful in ambulant cases of flesh wounds with granulating surfaces of the leg. It combines the antiseptic wound treatment with an elastic support. It is made of acid carbol. 2, 0, zinc oxid, gelatin, glycerin and water each 300, 0. The leg is encased in a gauze bandage impregnated with this zinc glue.

Our cases of gunshot injuries of the chest seem relatively benign. A few have developed pyothorax, occasionally with lung abscess, but all of these have done well after rib resection and drainage. Many cases of "steckschuss" with the projectile lodged in the lung, associated with hematoma, have gone on to slow but steady recovery under conservative treatment.

The removal of projectiles under direct Roentgen illumination as developed in Vienna by Holzknecht and von Eiselberg has proved of interest and value. A small fluoroscope is worn as a monocle over one eye and the surgeon cuts down on the projectile under direct ocular guidance. Dr. Ralph Bettman of our clinic has adopted an ordinary fluoroscope of small size to this method.

THE DOCTOR AS A COMMUNITY ASSET *

LEE B. NUSBAUM
RICHMOND, IND.

A man is bigger than his business or his profession; his value to the community should be greater than the value of his merchandise on the one hand or the practice of his profession on the other. Not all of the doctor's obligations can be met by simply performing the daily routine of medical practice. It is sometimes salutary for the doctor to take a personal invoice and strike a balance to determine his own worth as an asset to the community.

Each community makes a direct contribution to the business interests of the doctor. There is always an unearned increment for which he is a debtor until the obligation has been discharged, and it is highly important that this obligation be recognized.

First of all, the doctor is indebted to the community for the conditions that make it possible to conduct a profitable practice. It is true he pays a certain monetary consideration for this and renders a certain service in addition thereto, but it is also true that there are elements in this that money alone cannot purchase, for the development of a substantial and profitable medical practice is the work of years and of complex processes. To offer adequate financial compensation for all of these is manifestly impossible. This is an obligation that cannot be met with the coin of the realm.

Early settlers push their way into the virgin territory. Perhaps they follow the mountain passes and Indian trails or the course of rivers as they lead to the new regions yet undisciplined by the tool of the white settler. They plant their stockade where the trail crosses the river and little colonies push their habitations out along the trail and up and down the river. The stockade affords not only a point of common protection but of mutual exchange of ideas and commodities. Among the first of these early settlers we usually find the family doctor, whose services are indispensable, and adds much to the community's welfare. This primitive settlement soon shows growth and improvement by the building of the schoolhouse, the church and other institutions of civilization. Not alone these, but the increasing volume of business in the settlement adds to the value of the doctor's location, and every element that makes for the progress of the community makes its contribution to the value of this central point.

Special emphasis should be laid on *the culture of the community as an element of the community's value to the doctor* as a place to engage in his profession. Increase of knowledge has a tendency to increase the felt needs of an individual. He who cannot read has no use for books. To him the newspaper has no special value. He is neither conscious of the need of the many ordinary necessities nor of a way to secure the same. A dull intellectual life in a community means, comparatively, dull business for everybody. Schools and colleges, clubs and societies, churches and a free press awaken a community to a sense of its higher needs and to the possibility of life's enrichment.

The African village is well equipped when provided with a few rude pots, houses of mud, rudely thatched, a few instruments of warfare and a minimum of apparel. The African holds his wealth in his wives, and differs from us chiefly in this that he exchanges them at his

* Read before the Wayne County Medical Society at Richmond and referred to THE JOURNAL for publication.

will, while we exchange ours at their will by decree of the courts. His wife is an asset of value, while with some of us the wife is an expensive luxury.

Now open your office in this African village. You would not need all of the drugs now prescribed, or even if you did, you would not have access to the modern well-stocked pharmacy. Such a village itself has no element of permanency. The invasion of a stronger tribe, a scarcity of game, or the caprice of the village chief might at any time lead to the removal of the village. Now your location would therefore be of little permanent value, and the community itself, because of the narrow life thereof, would offer you small inducement to locate. The difference in value between such a village and an American city as a place to practice medicine exhibits the value which civilization and culture contributes to the community.

In a way the doctor is profited by the development of the moral character of the community. The large volume of credit business in every community depends chiefly for the profit thereof on the reliability and promptness of the creditor in meeting bills as they fall due. The character element entering into these accounts becomes therefore a strong factor in the profit of the same. Whatever, therefore, develops the character of the customer so that he is more prompt and honest and more capable of meeting his accounts increases the value of the community to the doctor. It is here that the value of schools, of churches, of Christian associations, of social settlements, of high class Chautauqua assemblies and institutions of this general order directly affects the profit of the doctor and makes him a debtor to their character forming work. This element of worth is none the less real because it is intangible.

Now if the doctor enjoys in the community the advantages suggested and is directly benefited in the ways pointed out, an important question presents itself for the doctor to answer. "Am I giving the community value received for the benefits which are afforded me in my location, or am I conducting my profession and living my life for personal profit only?" In other words, "Is the doctor an asset to the community, and is he worth more to the community than he extracts from it—or otherwise?" To meet his obligation, what ought a doctor give to the community? First of all—as a doctor—he is under obligation to give the city or town in which he is located a convenient and well-equipped office. As he is per-

mitted to occupy a central location in the heart of the community, there is an obligation resting on him to serve the community well in the capacity for which he exists. While the practice of medicine in all of its phases may not be under the competitive system, yet he owes to his patient, as well as his brother in the profession, a fair deal, not aiming at a personal monopoly by unprofessional methods, for as he is permitted a place in the community to serve it, he ought also to recognize that his duty alike to the profession and the public is that of "Live and let live."

It is true that *every citizen should be public spirited and display an intelligent interest in public affairs*, but there is a *special reason for the doctor's interest*. Not that he seeks or expects special favors for his business, but because the prosperity of his business will depend on the encouragement and promotion of those movements that make for the betterment of the entire community. He must share in the common prosperity of his city.

But, again, let it be said that "the man is bigger than his business." On the face of a marble slab in a foreign cemetery these words are said to be inscribed concerning a character whose bones we may believe rest in peace beneath:

"Born a man, died a doctor."

It is feared that his life has been emulated by too many modern doctors. The appeal of the profession with its enticement of large fees, the compulsion of increasing business and the burden of its cares have too often narrowed the range of life from the broader manhood to the confines of a mere practitioner's life and outlook. The stultification of the man seems sometimes to progress conversely with the development of the doctor, until the man is utterly lost. The higher manhood should not succumb in the struggle for existence and for financial success. The man owes the community a debt because of what the community has done for him as a *man*. Certain conditions which make medical practice profitable to the doctor, and consequently enrich him, enlarging his capacity for public service, have in them elements of peril to the public also. The concentration of population in our cities presents the city problem and the city peril. Recent census returns show that urban population has increased almost three times as fast as the rural population in the last decade. In other words, 73 per cent. of the total increase in population has been in cities of 25,000 population or more. With

the continuance of the growth of city population it will not be long until the city will wield the dominating influence in our political life. Frederic C. Howe has well said: "The city has replaced simplicity, industrial freedom and equality of fortune with complexity, dependence, poverty and misery, close beside a barbaric luxury like unto that of ancient Rome. Vice, crime and disease have come in. The death rate has increased, while infectious diseases and infant mortality ravage the crowded quarters. The city has destroyed the home and substituted the hotel, flat, tenement, boarding house and cheap lodging house. Our politics have suffered, and corruption has so allied itself with our institutions that many despair of democracy. The city enacts an awful price for the gain it has given us, a price that is being paid in human life, suffering, and decay of virtue and the family."

While such city life affords the doctor a place of special value for the practice of his profession, it also calls for special activity in ameliorating the ills of its complex life. This activity the doctor owes to the community because he is a man and a citizen. To the want and woe of his community life he will not turn a deaf ear; but he will administer his charity in a discriminating and in a business-like way, not as a means of advertisement, but as a sincere effort to effect thereby a permanent cure for the pathologic conditions of society. While not confining it entirely to the organized channels, he will nevertheless chiefly promote such work through such organized efforts as shall handle the problems in a way commensurate with the needs. To secure the largest returns from such investments he will utilize the most approved and thorough instrumentalities rather than permit himself to become a "free hack" for every zealous enthusiast to ride on.

From the conservation of the best in the community life he will not withhold himself. As prevention is better than cure, the doctor owes an honest effort to promote such social conditions as shall insure thrift and self-help. Such movements as shall conserve the public health, secure satisfactory housing conditions, prevent the sacrifice of the strength of girlhood by unlawful child labor, are all worthy objects for every doctor as well as every citizen's consideration.

To the public school system we owe much of the progress of our community life. To see that these schools are maintained not for the promotion of political interests, but for the pro-

duction of the best educational results in the training of an intelligent, alert and honest citizenship, should be one of the doctor's chief concerns. Closely allied with the general educational work of the community are such cultural movements as are represented by art and music associations, historical and other bodies. Not alone the public welfare, but a personal culture and relaxation through change of interest should invite a man to some place in and some support of such movements.

In the efforts made by proper commercial organizations to improve the general conditions of trade, the doctor will through *self-interest*, if for no higher reason, find a place.

We do not hesitate to say that to the church and allied religious organizations the doctor in every community is greatly indebted and under obligations that nothing but a personal interest and activity can discharge. More largely than we ordinarily admit are the conditions of our modern commercial life determined and improved by the religious, educational and cultural influence of the various forms of church life. The doctor can best support this splendid interest by translating its principles into conduct and by application of its lofty principles as speedily and completely as possible to the commercial life of every day. He should carry his religion into his profession as well as his profession into his religion.

The political conditions of the present command the active participation of every lover of his city and his state. The problems before alluded to, the complication of conditions that prevail, the high stake for which the citizens of our great republic are contending and the active and even criminal interest of vicious classes of society demand of every honest and intelligent man interest and activity in civic affairs. Only as the doctor meets these obligations of a broader type will he be able to repay the community for the conditions of prosperity which it affords him.

It is clearly manifest that the times demand a continuance of conditions favorable to business because favorable to the welfare of society as a whole, and this fact ought to compel an enlistment of all forces making for the perpetuity of our institutions. Our history as a nation has not all been written. The test of prosperity is apt to be more searching than the test of adversity and war. The call of the day is a call of all classes to a manhood that can rise superior to class conditions and venture itself for the common good. The bugle blast

for the present age was nobly sounded by Richard Watson Gilder in these lines:

"Do thy part
Here in the living day, as did the great
Who made old days immortal! So shall men,
Gazing back to this far-looming hour,
Say: Then the time when men were truly men;
Though wars grew less, their spirits met the test
Of new conditions, conquering civic wrongs;
Saving the state anew by virtuous lives,
Guarding the country's honor as their own,
And their own as their country's and their son's;
Defying leagued fraud with single truth;
Not fearing loss and daring to be pure.
When error through the land raged like a pest
They calmed the madness caught from mind to mind
By wisdom drawn from old, and counsel sane;
And as the martyrs of the ancient world
Gave death for man, so nobly gave they life;
Those the great days, and that the heroic age."

FAMILY SPASTIC PARAPLEGIA

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Family spastic paraplegia, while being a fairly well-recognized condition, is uncommon and its occurrence in three generations is still more so. In the following report the condition occurred in three generations of a family exhibiting many neuropathic manifestations.

The mother of the patient, W. L., was the third in line of birth of five children. The first sister had one daughter deranged temporarily for three months. The second in line had one son confined in this institution. H. C. diagnosed paresis. The fourth in line had one son, an epileptic, who died in a state institution. The children of the fifth sister have as yet shown no neuropathic taint.

The mother of the patient is living at 67 years of age. She is confined to her bed because of inability to use her lower limbs. As a baby of 9 months she is said to have had "spotted fever" and did not walk until 4 years of age. From then until 37 years of age she enjoyed perfect health. At the age of 37 years, while walking in the street, she suddenly lost the power in her lower limbs and had to be assisted to her home. There was no history of previous trauma or pain. Thereafter her limbs were stiff and she scraped the toes of her shoes in walking and rubbed her knees together. With the aid of a chair she was able to get around and do her work, but the stiffness of the lower limbs gradually increased until at the age of 59 she became unable to walk, even with assistance, and for the past eight years has been confined

to her bed. The function of the upper limbs has never been impaired. At the present time the lower limbs are stiff in extension, the knees overlapped and the feet turned somewhat inward. Both lower limbs feel cold to the touch; there is no sensory disturbance and she has at no time ever complained of pain. There is still perfect control of the bladder and bowel. She was always "sway-backed," and this seemed to have increased after the loss of power in her lower limbs.

The patient above described is the mother of five children. The first child in line is a female of normal birth and childhood. She married at the age of 22 and had one child that died at 10 years of age of typhoid fever. This patient enjoyed perfect health until the age of 30 years, when she began to notice a stiffness of her lower limbs and that she dragged her toes in walking. In walking her knees would cross and she frequently tripped. She was always subject to cold feet. Her spine is straight and she has no disturbance of sensation or of the function of the bladder or bowel. She is still able at the age of 42 years to get about and does her housework.

The second child in line is a male, living at 40 years of age and in perfect health.

The third in line is a female child, living at 38 years of age. She is good health, married, and has four children, of which the two girls at 15 and 8 years of age had "St. Vitus' dance."

The fourth in line is a male confined in this institution since Sept. 8, 1908. He was of normal birth. At 3 years of age he was struck on the head with a rock and lay for three days unconscious. He suffered no "fits," and appeared to be in good health following his accident. As a child he was very fleet of foot and learned poorly at school. At 14 years of age he was found lying on the ground unconscious of unknown cause and remained in an unconscious condition for three days. There were no apparent resulting disturbances. At 16 years of age it was noticed that his limbs were becoming stiff and that he dragged them in walking. This stiffness gradually increased until at the age of 22 years he was obliged to walk with support. At 29 years of age he was admitted here in a state of acute maniacal excitement. Until recently he walked with one crutch and one cane, but now requires two crutches, and both legs, closely approximated and directed toward the right, are moved "en masse." He cannot walk without aid, but when he has established his equilibrium he can stand without support. The lower limbs in comparison with the upper limbs show some atrophy, but this is an atrophy from

disuse. The limbs measure alike other than the left thigh, which is 1 inch less in diameter than the right. The patient is able to flex and extend both limbs at the hip and knee. Against resistance the extensor power is better than the flexor, and both are better in the right limb than in the left. At the thigh there is some slight power of abduction and adduction. He can flex and extend the left ankle but not the right. There is, however, power of movement of the toes of the right foot. On passive movement of the lower limbs the spasticity is increased. The patellar and Achilles reflexes are decidedly exaggerated; the right slightly more so than the left. There is true patellar and ankle clonus elicited on both sides. There is a positive Babinski and Oppenheim reflex in both sides. In testing for the Babinski reflex, there succeeds, when the big toe has reached its maximum of extension, a series of clonic-like movements of the entire foot. There is no contralateral reflex. The cremasteric and umbilical reflexes are both present, but decidedly more active on the left side than on the right. There are no defensive movements elicited. The patient feels light touch and pinpoint equally well over the entire body, localizes correctly and differentiates correctly head and point of the pin, heat and cold. The senses of motion, position and bone conductivity are unaffected. The pupils are round, central, equal and react promptly to light direct and consensual and in accommodation. The extra-ocular movements are well performed and there is no contracture of the visual fields, ptosis or facial palsy. The tongue is protruded in the median line and there is no tremor or atrophy. The speech is unaffected. The grips are fair and equal. There is a coarse tremor of the hands on extension, but no tremor or ataxia in performing the finger-to-finger and finger-to-nose tests. The tendon reflexes of the upper limbs are present, prompt and equal. There is no bladder or bowel disturbance other than that the patient must "hurry." The patient complains of no subjective pain in the back or elsewhere. The Wassermann tests on the blood and spinal fluid are negative. There was no coloration of the spinal fluid and eight cells per cubic millimeter.

The fifth child was a girl of normal birth and childhood. At the age of 15 years her limbs became stiff and she dragged them similar to the above patient. She died at the age of 29 years following an operation for appendicitis, but, though the stiffness of her lower limbs had gradually increased, she was able to get about without support up until the time of her last illness.

I am indebted to Dr. O. E. Holloway for the following abstract which he has very kindly furnished me in regard to the son of the last above described patient:

"There is absolutely no impairment of the function of the upper limbs. The date of the appearance of the trouble in the lower limbs I cannot give you. From what the patient states it must have existed since infancy. He has been here three years and was in much worse condition than at the present time. The tendon reflexes of the lower limbs are slightly exaggerated. The Babinski sign is present, there being a slight extension of the big toe on plantar stimulation of either foot. The sensation in the lower limbs is but slightly, if anything, impaired. When the boy keeps his attention directed toward walking properly, he walks very well and it is only when his attention is directed toward something else that he will stumble over his feet. There is no giving away either in the knees or ankles. It is simply a process of stumbling over himself."

LEGISLATION recently has been enacted which will provide for approximately 300 additional medical officers in the medical corps of the United States Navy. The pay ranges from \$2,000 per year, with quarters or an allowance therefor, for assistant surgeon with the rank of lieutenant, junior grade, to \$8,000 with allowance on attaining the grade of medical director with the rank of rear admiral of the upper half. Applicants must be between the ages of 21 and 32 years, citizens of the United States, and must submit satisfactory evidence of preliminary and medical education. The examinations for appointment in the medical corps consist of two stages, the first stage, securing appointment in the medical reserve corps, and the second stage, securing an appointment as a commissioned officer in the regular medical corps. After the candidate passes the preliminary examination he attends a course of instruction at the Naval Medical School. During this course he receives full pay and allowances of his rank and at the end of the course he takes a final examination. Two of these courses begin each year, one commencing about the first of October and the second course beginning early in February. The examinations are held in several of the coast cities in the United States, both on the east coast and the west coast, and also at Chicago. Literature describing the Navy as a special field for medical work, and circulars of information for persons desiring to enter the medical corps, may be obtained by addressing the Surgeon General, U. S. Navy, Navy Department, Washington, D. C.

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EDITORIALS

THE EPIDEMIOLOGY OF INFANTILE PARALYSIS

Slowly but surely our knowledge about infantile paralysis is increasing. We are beginning to learn something definite, both as to the cause and the method of prevention of the disease.

Everyone already is familiar with the studies of Flexner and his co-workers on the etiology of poliomyelitis. These investigators succeeded in isolating a pleiomorphic coccus which they believe to be the specific etiologic factor. Recently Rosenow and other workers have succeeded in isolating streptococci which seem to have a specific affinity for the central nervous system, and these organisms are regarded by them as the agents causing infantile paralysis. It is possible that the bacteria isolated by Flexner may be similar to those isolated by these later investigators. The morphological differences of the bacteria may be due entirely to the different methods used in cultivating them. Evidently it is some form of coccus that causes poliomyelitis. Whether it is really a streptococcus or some specific micrococcus manifesting pleiomorphism will have to be settled by further investigation.

In regard to the spread of this disease, the most authoritative conclusion is that reached by the committee of the American Public Health Association which has been studying the problem. In their report, which has just been made public by the Federal Public Health Service, they summarize their conclusion as follows: "The weight of present opinion inclines to the view that poliomyelitis is exclusively a human disease and is spread by human contact, whatever other causes may be found to contribute to its spread."

This committee recommends the following

measures for the control and prevention of the disease: All infected and recognized cases should be reported promptly. Patients should be isolated in screened premises for at least six weeks. The various discharges from the body must be disinfected. The children of the family should be excluded from school or other gatherings, and all movements of those coming into intimate association with the victim should be restricted as far as practicable. During epidemics children should be prevented from coming into contact with other children or the general public, and those who have come into contact with the disease should be under observation for two weeks after the last exposure.

The public already appreciates the necessity of stringent measures for the prevention of this dreaded disease, so that the health officer or physician who undertakes to enforce the measures recommended for this purpose will invariably have the united support of his whole community. It is, then, up to us to do our whole duty in this respect whenever the occasion arises.

A NEW MEDICAL BUILDING NEEDED BY THE UNIVERSITY

The Indiana State Medical Association did a wise thing when it passed a resolution at the Fort Wayne session asking the incoming legislature to appropriate money for erecting and thoroughly equipping a new medical college building for the Indiana University. The resolution will amount to nothing unless the members of the Association individually take an interest in this matter and urge on the incoming legislators the necessity for taking appropriate action. We now have but one medical school in the state of Indiana, and that school is under the control of the state. The people should be willing to support the school in such a way that the institution will do credit to Indiana and be on a par with similar institutions of learning in adjoining states. The medical building at Indianapolis is now a disgrace to the state. It is inadequate in every particular, and should be augmented by a new and larger building, furnished and equipped suitably for the high character of work that is done by the institution. It is truly remarkable that from an educational point of view the Medical Department of the University has been able to maintain such a

high standard of excellence with so little help and encouragement from the state. While surrounding states have made lavish appropriations for their universities, and are justly proud of their institutions, Indiana has been niggardly in its appropriations for her University, and doubly niggardly in appropriations for the Medical Department. The time has arrived when the legislature must come to the assistance of the University, and every legislator, irrespective of political affiliation, should be interested in making the Medical Department of Indiana University second to none in the country, and the people will endorse any expenditure that is made wisely in building up the educational institutions of the state. Indiana doctors can and should wield a powerful influence in bringing about the desired results. Nothing will be accomplished by flowery resolutions, but something may be accomplished by personal influence with the various legislators. Let us begin at once to urge favorable consideration of this important subject to the end that the next legislature will make an appropriation for one or more medical buildings that shall in every way be adequate to the needs of an institution that, so far as its educational work is concerned, now ranks with the best.

DIRTY DOCTORS AND DIRTY OFFICES OF DOCTORS

The Indiana State Board of Health, at its meeting of Oct. 17, 1916, passed the following resolution:

WHEREAS, Frequent complaints have come to the members of the State Board of Health from citizens of this state concerning the dirty and unsanitary offices of doctors of medicine, and of dentists, and the members of these professions who are personally unclean, and

WHEREAS, Such dirty and unsanitary conditions are not infrequent, therefore be it

Resolved, That the State Board of Health of Indiana is sincerely sorry that such unclean and unsanitary doctors' and dentists' offices exist in our state, and also that doctors and dentists are frequently seen who are unclean and unsanitary in their persons and habits, hence, we urge all physicians and dentists, and especially health officers, to keep their offices in a sanitary condition and to be clean in person and habit so that the public may look up to them as examples of clean and right living. And be it further

Resolved, That we respectfully urge the great body of physicians and dentists who are or who are not

clean and sanitary themselves to give their hearty support to the State Board of Health in this very important matter, and by thus doing deserve the highest standard of respect as leaders of public thought and progress.

This is a sad commentary on at least a part of the medical profession of Indiana, and yet we are willing to admit that it is deserved. But what is true in Indiana is true in other states, as we happen to know, and other state boards of health could, with equal propriety, pass resolutions similar to those passed recently by the Indiana State Board of Health.

There is absolutely no excuse for the uncleanness exhibited by some doctors in the care of their persons as well as in the care of their offices. The doctor who goes about with dirty linen, unbrushed and unpressed clothes, and dirty finger nails is unworthy of patronage, and he deserves ostracism by all respectable people. The dirty and insanitary office is altogether too frequently encountered, and the doctor who has no more pride than to maintain an unkempt and insanitary office is not deserving of the name of doctor.

We believe that the Indiana State Board of Health has taken a step in the right direction when it condemns the dirty doctor and the dirty offices of the doctor, and we believe that the board would do justice to the public if the doctors' offices referred to in the resolution under consideration were publicly condemned. The board compels many individuals to clean up their premises, and why not compel the doctor to clean up his premises if conditions justify such action? Incidentally, there are a few doctors who ought to be asked politely but firmly to buy a cake of ivory soap, a nail brush, a whisk broom, and some clean shirts and collars, and make use of them as indicated.

In making this statement we frankly admit that the criticism does not apply generally, but it does apply in more than one community in Indiana, and it also applies to more than one community in every state in the Union. The Indiana medical profession is just as far advanced in everything that pertains to success as the medical profession in any other state, but we are not so egotistical as to think that there is no room for improvement, and even room for improvement in cleanliness and sanitation as applied to a few of our physicians.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

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Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

THE high cost of living is hitting the average doctor harder than it is hitting anyone else, for there isn't a solitary thing used by the doctor in his professional work, or in the general upkeep of his home, that has not greatly increased in cost during the last two years. Probably this increase will average 50 per cent., and 33 $\frac{1}{3}$ per cent. increase would be a perfectly safe estimate; but in spite of all this increase of all expenses, the doctor continues to charge the same old prices he charged five, or even twenty years ago. He also continues to be just as careless in presenting bills and making collections. No wonder he complains about the hard times, and no wonder he gets a reputation among his neighbors and friends as being "bad pay." He cannot expect to keep up his own credit if not paid adequately for his work and if he doesn't use business methods in the collection of his accounts and the payment of his own bills.

IN view of the fact that but few complaints have arisen in connection with medical and surgical services rendered, payment for which comes under the Workmen's Compensation Act, it is presumed that the awards made by the board have been reasonably fair. Occasionally a physician has just cause for complaint, and it is just such instances that require the services of an executive officer of our Association to straighten out. If a doctor's bill for services rendered an injured employee is within reason, and in keeping with charges for similar services in the vicinity where the accident occurred, there is no reason why the bill should not be paid. On the other hand, if in the form of distortionate practice (seldom the case), the act merits the disapproval of medical men as a class, and reduction by the compensation board should be sustained. However, there is no

reason why the medical fees prevailing at the present time, low as they are, should not be the fees awarded by the compensation board.

THE Vanderburg County Medical Society has passed a resolution, notice of which appears elsewhere, which favors an amendment to the Workmen's Compensation Act whereby an injured employee shall have the right to select his own medical or surgical attendant instead of being compelled, as at present, to accept the services of the physician or surgeon designated by the employer. This is a matter which should be of interest to employers of labor as well as to employees. It is no more than fair that the employee should have the privilege of selecting his own medical attendant, and it is quite probable that in the majority of instances, under such a plan, thoroughly competent physicians would be selected, and this, of necessity, must be a matter of interest to the employer.

MANY inquiries have been made concerning the duties of the new Executive Secretary provided for by the action of the House of Delegates at the Fort Wayne session of the Association. As yet the Executive Secretary has not been selected, as the committee empowered to make this selection very wisely is taking sufficient time to consider the subject from every standpoint, and to look well into the qualifications of the candidates to fill the new office. The new officer will not take over the duties of any of the other officers, but act as an executive to correlate all of the various activities of the Association in the interest of more effectiveness and far reaching benefits to the medical profession. For instance, the Executive Secretary will act as a secretary and member of all the various committees that may be found necessary to consider the numerous enterprises and activities in which the Association is interested. This will mean that something besides a lot of resolutions, that are worthless and accomplish nothing, will be forthcoming from these committees. The committees on Public Policy and Legislation, Medical Economics, the various conservation committees, and, in fact, any and all committees of the Association, need someone at the head who can give the subjects represented something more than perfunctory attention. The busy doctor may be very greatly interested in the subject, but he hasn't the time, and, more often, hasn't the executive ability to bring about the desired results. Our present Medical Defense feature, while admirably conducted from every point of view, will be greatly

aided by the advice and work of the Executive Secretary; and this also is true of the work of medical organization, now in the hands of the councilors. Then there are the tangles occasioned by misunderstandings and unfair interpretations of the Workmen's Compensation Act as applied to medical and surgical services, which an Executive Secretary can help to straighten out. In short, there are many ways in which an Executive Secretary, who devotes his whole time and attention to the good of the Association and its members, can be immensely helpful in furthering the interests of Indiana doctors individually and collectively.

DEATHS

MARY C. JONES, wife of Dr. H. E. Jones of Anderson, died October 19.

MARTHA STALEY, widow of Dr. L. B. Staley of Bicknell, died October 18, aged 62 years.

MATHIAS DEARTH, M.D., aged physician of Frankfort, died October 4 from cancer of the liver.

LOUISE D. REYNOLDS, widow of Dr. S. H. Reynolds of Columbus, died October 21, aged 62 years.

JOHN F. MADDOX, M.D., formerly of Shelbyville, but for the past few years of Orlando, Fla., died October 18 at the home of his sister at Edinburg.

JOHN S. SPROWL, M.D., Warren, Ind., died October 10 following an attack of cerebral hemorrhage. The doctor had practiced medicine at Warren for forty-five years. He leaves a widow, and two sons who are doctors—Dr. Fred Sprowl of Spokane, Wash., and Dr. Raymond Sprowl of New York. The medical profession of adjoining counties was largely represented at the funeral. Dr. Sprowl was a graduate of the University of Michigan, 1872, and attended the reunion at the Detroit meeting in June. He was a member of the Indiana State Medical Association and American Medical Association.

CECIL C. KIMMEL, M.D., of Fort Wayne, died October 18 at the Lutheran Hospital, following an illness of several weeks from typhoid pneumonia. Dr. Kimmel was born in Kendallville in 1882, educated in the public and high schools of that city, attended the old Fort Wayne Medical College and graduated from Indiana University

School of Medicine in 1907. He began the practice of medicine in Fort Wayne immediately after his graduation and continued his work in that city until his last illness. He was a member of the Fort Wayne Medical Society, Indiana State Medical Association and American Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

GENERAL

DR. JOHN FOUTS, formerly of Centerville, has removed to Richmond.

DR. W. P. ALEXANDER of Indianapolis has returned from a trip to Alabama.

DR. EDGAR R. HIATT of Portland was married recently to Miss Mary Wright.

THE new addition to the Holy Family Hospital at La Porte, costing \$34,000, has been completed.

DR. MATTHEW WOODS of Philadelphia, well-known specialist on epilepsy, died October 13 following an operation.

DR. A. R. KERR, formerly of Mellott, has located at Attica and has offices in the Central National Bank Building.

DR. HERBERT D. FAIR of Muncie announces his marriage, on October 15, to Dr. Bertha R. Wilson of Kansas City, Mo.

DR. M. H. KREBS of Huntington spent the month of October in New York and Philadelphia taking postgraduate work.

THE Jay County Medical Society met in regular session on October 11 at the office of Drs. Schwartz and Hiatt at Portland.

THE annual meeting of the Indiana Osteopathic Association was held at Hotel Severin, Indianapolis, on November 1 and 2.

DR. and MRS. A. M. HETHERINGTON of Indianapolis spent the last of October motoring through southern Indiana and Kentucky.

DR. WALTER M. BECK of Minneapolis, Minn., formerly of Delphi, Ind., died October 10 from the effects of an automobile accident on August 20. Dr. Beck was 54 years of age.

WILLIAM H. MCCLURG, M.D., of Kokomo was injured and his automobile completely demolished, October 4, when he crashed into a freight train on the I. R. & L. railroad.

DR. W. L. HAMMERSLEY of Frankfort, local surgeon for the Pennsylvania Railroad, attended the annual meeting of the Pennsylvania Railroad Surgeons' Association at Philadelphia.

DR. CHEVALIER JACKSON of Pittsburgh, Pa., has been appointed professor of bronchoscopy and esophagoscopy and direct laryngoscopy at the New York Postgraduate Medical School and Hospital.

DR. JOHN A. McDONALD of Indianapolis was married on October 24 to Miss Julia Loring Haines of the same city. They will be at home after the first of March at 3227 North Pennsylvania Street.

DR. and MRS. J. A. WORK, SR., of Elkhart are leaving Elkhart to make their home with their daughter in Phoenix, Ariz. The Elkhart Academy of Medicine tendered Dr. Work a farewell banquet.

DR. F. A. LOOP of Lafayette has resigned as medical superintendent of the Wabash Valley Sanitarium, which position he has held for the past six years. He will give his entire attention to his private practice.

DR. and MRS. D. S. LINVILL of Columbia City spent the latter part of October in Philadelphia and New York. While absent he attended the annual meeting of Pennsylvania Railroad Surgeons held at Philadelphia.

DR. A. I. RINGER, formerly assistant professor of physiologic chemistry at the University of Pennsylvania, has been appointed professor of clinical medicine at the Fordham University School of Medicine, New York.

DR. D. V. MCCLARY of Dale was elected president of the Southern Railway Surgeons' Association at their annual meeting at St. Louis on October 3. The next annual meeting (1917) will be held in Jacksonville, Fla.

DR. J. M. PULLIAM of Fort Wayne announces that his practice is limited to mental and nervous diseases, and that patients requiring hospital care will be received at his private hospital at 1822 East Wayne Street, Fort Wayne.

ONE important action of the Indiana Conference on Mental Defectives, held at Indianapolis recently, was the permanent organization of the State Society for Mental Hygiene, which will be affiliated with the national committee.

DR. VINCENZ CZERNY, professor of surgery at the University of Heidelberg and director of the Institut für experimentelle Krebsforschung, died October 3, aged 74 years. He was one of the most notable figures in medical practice in Heidelberg.

DR. F. A. DOUGLAS, who took charge of the practice of Dr. D. W. Stevenson when the latter moved to Akron, has given up his practice at Richmond and joined the medical corps of the Canadian army. He will be succeeded in his practice by Dr. E. E. Holland.

DAVID C. RIDENOUR, M.D., of Peru has been awarded \$500 damages against the Fort Wayne & Northern Indiana Traction Company due him for humiliation and physical injuries received when ejected from one of the company's inter-urban cars in Peru on Feb. 15, 1911.

DR. ISAAC LEVIN of New York has resigned as associate in cancer research in the George Cricker Special Research Fund, Columbia University, to accept an appointment as clinical professor of cancer research in the University and Bellevue Hospital Medical College.

UNDER the direction of the Oral Hygiene Committee of the Children's Aid Association of Indianapolis, a clinic for children will be held on Tuesdays and Thursdays from 2 until 5 o'clock. Dentists of the Indianapolis Dental Society donate their services to this work.

A CALL for missionary hospital work in India comes from Salvation Army headquarters in New York City as follows: Qualified medical man required who is in sympathy with religious work. Passage paid and small monthly allowance made. Three years agreement. Apply, sending copies of testimonials, to Commander Eva Booth, Field Department, Salvation Army Headquarters, 122 West 14th St., New York City.

THE State Board of Health, in a recent special meeting, authorized Secretary J. N. Hurty to institute an inspection as to the sanitary conditions of the offices of physicians in the state. It is reported that this action was taken in obedience to many requests received in letters.

THE New York County Medical Society of the state of New York will conduct, through the Comitia Minora, a state-wide campaign for the elimination from the public health law of that section under which, by recent ruling of the Court of Appeals, Christian Scientists may claim the right to practice.

DR. LUCIAN SMITH, who for the past six years has been in the employment of the state of Indiana as physician and surgeon at the State Soldiers' Home at Lafayette, has purchased the office of the late Dr. John S. Sprowl at Warren and will engage in the practice of medicine and surgery at that place.

THE next session of the Western Surgical Association will be held December 15 and 16 at St. Paul, Minn., instead of Indianapolis as scheduled. The change has been made because of the absence of the chairman of the Committee on Arrangements, Dr. Joseph Rilus Eastman of Indianapolis, who is at the head of a surgical unit in Austria.

THE *Texas Medical News*, on its twenty-fifth anniversary, merges into a new national publication to be known as *Medical Insurance and Health Conservation*, with change in size and style. The circulation will be double that of the old journal and the subscription price will be \$2.00 per year. Dr. M. M. Smith continues as managing editor.

THE fourteenth annual convention of the Indiana State Nurses' Association was held at Indianapolis October 11. Officers for the coming year are as follows: president, Miss Edith G. Willis, Vincennes; first vice president, Miss Olive Bailey, South Bend; second vice president, Miss Gertrude Upjohn, Lafayette; secretary, Miss Lora B. Roser, Shelbyville; treasurer, Miss Belle Emden, Indianapolis.

AT the recent meeting of the Clinical Congress of Surgeons of North America, held at Philadelphia, a resolution was adopted forbidding its members from engaging in the practice of the division of fees under any guise what-

soever. Dr. John G. Clark of Philadelphia was elected president of the Congress and Dr. Franklin H. Martin of Chicago secretary. New York was chosen as the next meeting place.

AT the recent meeting of the Mississippi Valley Medical Association held at Indianapolis, the following officers were elected: president, Dr. Channing W. Barrett, Chicago; first vice president, Dr. F. M. Pottenger, Monrovia, Cal.; second vice president, Dr. F. B. Wynn, Indianapolis; secretary, Dr. Henry E. Tuley, Louisville, Ky.; treasurer, Dr. S. C. Stanton, Chicago. Toledo was chosen for the meeting place for 1917.

THE directors of the Christian Science church have accepted a gift of twenty acres of land in Brookline, Mass., on which they will erect buildings and establish and maintain a resort for the "so-called sick." The plan is to have Christian Science treatment given under ideal conditions, and to give as well such instructions in practical methods of caring for those under treatment as may be consistent with Christian Science teachings.

THE new \$125,000 addition to the Methodist Hospital at Indianapolis has been completed, and the entire establishment now represents an outlay of \$600,000. The new wing will accommodate sixty-five patients, making the total capacity 250. Three rooms on each of the five floors of the new wing are equipped with bath, and there is running water in each room. Each room has indirect light, reflected from the ceiling. The rooms on the first floor have ivory furniture; the other rooms are in mahogany. Each floor has a fully equipped diet kitchen. A roof garden and sun parlor for convalescents are valuable features.

AT the fifth annual convocation of the American College of Surgeons two hundred and twenty-eight surgeons from all parts of the United States, China, India, the Philippine Islands and the Panama Canal Zone were admitted as fellows. Dr. Ernest Sidney Lewis of New Orleans received the honorary degree. Chicago was chosen as the permanent home of the organization, and the following officers were elected: president, Dr. George W. Crile, Cleveland; first vice president, Dr. Robert G. LeConte, Philadelphia; second vice president, Dr. Rudolph Matas, New Orleans; treasurer, Dr. A. J. Ochsner, Chicago; secretary, Dr. Franklin H. Martin, Chicago.

THE Union District Medical Association met in its ninety-eighth semi-annual meeting at Hamilton, Ohio, on Thursday, October 26, under the direction of Garrett Pigman, president, and Will A. Thompson, secretary-treasurer. The following scientific program was carried out: "Summer Diarrhea," F. T. DuBois, Liberty, Ind.; "Seminal Vesiculitis," R. D. Morrow, Richmond, Ind.; "Some Results Obtained from Modern Methods of Treatment of Epilepsy," C. A. L. Reed, Cincinnati, Ohio; "Some Points in the Diagnosis of Intestinal Lesions," C. J. Tucker, Rushville, Ind.; "The Diagnosis and Treatment of Acute Lobar Pneumonia," E. M. Glaser, Brookville, Ind.

AN anonymous donor has offered, through the Societe Nationale de Chirurgie of Paris, a prize of 50,000 francs for a mechanical apparatus best supplying the place of the hand. Competitors must belong to the allied or to neutral nations. They are to present to the society crippled men who have been using the apparatus for at least six months. The society will also experiment with the apparatus on cripples for as long a time as is thought necessary. The apparatus to which the prize is awarded is to remain the property of the inventor. The competition will be closed two years after the end of the war. Competitors are requested to send their apparatus and a description to M. le Secrétaire General, Societe Nationale de Chirurgie, 12 rue de Seine, Paris.

SOCIETY PROCEEDINGS

THIRD DISTRICT

Third District Medical Association met at French Lick Thursday, Oct. 26, 1916. The meeting was called to order by President Dr. H. C. Knapp at 11:30 a. m. Sixteen members were registered.

Minutes of previous meeting were read and approved.

The councilor, Dr. Joseph D. Heitger, made a report of the recent meeting of the State Medical Association.

There was a discussion of ways and means of raising money to carry on the work of the district association. Dr. Walter Sherwood made the following motion:

Moved that the secretary request the secretaries of the county societies in the district to collect from each member in his society 25 cents, this money to be forwarded to the district secretary to be used for the purpose of defraying the expenses of the district association.

This motion was carried by the unanimous vote of those present.

It was decided that the spring meeting be held at West Baden, the date to be set by the officers in the near future.

The first paper on the program was that of Dr. Frank A. Mosby (dentist) Huntingburg. Dr. Mosby said in part:

To quote Dr. Charles Mayo in a recent address at Chicago, "The mouth is by far the greatest portal of entrance of germ life into the body, the most infected part of the alimentary canal."

He also made the statement that the next great step in preventive medicine should be made by the dentists. I believe that I voice the sentiments of the dentists when I say that we are ready to take that step, but we need your assistance and cooperation.

Last year in an article appearing from the pen of Dr. Hunter of London, England, what he called American dentistry came in for a severe scoring on the grounds that much of the crown, bridge, plate work and fillings done in this country were hot-beds for bacteria, the breeding place for countless millions of streptococci, staphylococci, pneumococci, etc.

In many cases the criticism is merited, but this application is too broad.

Unfortunately the dental profession is cursed by the presence of some members who know little or nothing about bacteriology or pathology, and care less; whose only aim in life is to put on four-minute gold crowns, chiefly on incisors; put in platinum, silver, amalgam and white metal filling all from the same bottle, and laud their own miraculous powers in the press at so much per for the press.

The solution of this problem lies in the education of the public, and the physician and dentist must cooperate in this work.

The presence of and accumulation of scale around the roots of the teeth causing inflammation of the gums may cause no immediate inconvenience, but as time passes, a seepage of pus begins in the affected area, to be continuously passed through the alimentary canal.

Why do people allow such conditions to exist in their mouths? Because we have been so busy repairing the damage done by disease that we have not had the time to instruct them how to prevent such conditions.

Discussion of Dr. Mosby's paper: Dr. J. D. Heitger said in part: The time is very ripe for this paper. The work of Rosenow, Billings and others points to the teeth as very dangerous sources of infection.

After an extensive discussion of focal infections Dr. Heitger made a plea for closer cooperation between the physician and the dentist.

Dr. Mosby, closing, discussed the relationship of nasal, throat and dental infections. He thought that the time was rapidly approaching when there would be a closer cooperation between the professions.

Following Dr. Mosby's paper the meeting adjourned until after lunch.

Afternoon session, 2 p. m. The first paper of the afternoon was that of Dr. Walter Sherwood, entitled "Eclampsia." Dr. Sherwood said in part:

Little as to its real cause is known. There has been an enormous amount of study put on the subject, reaching nothing but theory. Some advocate the kidneys, some the liver, while others both. However, the most plausible theory, while not positively proved, is toxicosis or toxemia, and intoxication of the blood. One could then speak of a nephritic toxemia, or hepatic toxemia, depending on which organ is most affected by the circulating poisons or whose

symptoms dominate the clinical picture or postmortem findings. If we knew whether the toxins came from the liver, the kidneys, the fetus, the placenta, the intestines, the general metabolism, disturbed glandular balance, from bacterial activity, or from any other source it would help our treatment immensely, but as yet we are groping blindly, empirically.

Heredity must be mentioned as a cause. In my own practice I have attended three sisters in eclampsia and know that their mother and some of her sisters had had this terrible affliction.

As to the frequency of the attacks, they occur once in about every six hundred pregnancies, but this varies in different statistics and in different localities. In my own experience the ratio has been one to two hundred.

The preventive treatment of eclampsia, in general, is equivalent to the conduct of the hygiene of pregnancy. In my own experience I have always emptied the uterus as soon as possible. The mortality of both mother and child is much less in this procedure. There are several methods of emptying the uterus hurriedly: abdominal cesarean section, vaginal cesarean section, but the best one for us red clay doctors is manual dilatation, forceps or version, depending on the engagement. Ether seems to have preference as an anesthetic in these cases and should be used as sparingly as possible. Morphine and chloral cannot be discarded although they must be used with great caution owing to their deepening coma, action on the emunctories, and danger to the child. Should there be hemorrhage after delivery one should not be overzealous to stop it as we have some staunch advocates of venesection. The after-treatment is much the same as we described under prevention: plenty of water for the first forty-eight hours and then a gradual return to a regular diet.

Discussion of Dr. Sherwood's paper: Dr. P. H. Shoer cited several cases in experience. Dr. J. D. Heitger discussed the work recently reported by Dr. Gary of Louisville. Dr. Gary has devised a method of inflating the breasts with air similar to the treatment employed by veterinarians in the treatment of so-called milk fever in cows.

Dr. Anna I. McKanney emphasized the necessity of education along the line of prevention. All pregnant women should be educated to place themselves under the care of a physician as soon as they are aware that conception has taken place.

Dr. Sherwood, closing: I shall feel that my efforts in writing this paper will have been repaid if you will remember one sentence, "Every pregnant woman is a potential case of eclampsia."

Following Dr. Sherwood's paper Dr. J. H. Oliver briefly outlined the work to be done by the state association in 1917, particularly the work of the executive secretary. Dr. Oliver made a strong plea for more interest and better attendance at the district meetings.

Dr. G. S. Bond read a paper entitled "The Diagnosis and Prognosis of Cardiovascular Disease."

Dr. Bond said in part: If we exclude the congenital heart deformities, and they are not often seen, there is practically no disease of the heart that is not simply a part of some general disorder. The cardiac disturbances are simply a point of localization or a resultant effect of a pathological process either general or involving a certain group of structures. Thus it is of prime importance that we study the disease conditions behind the heart disorder. By treating

them we often better the heart while on the other hand cardiac treatment alone will be ineffectual while the general disease is allowed to go on unchecked.

For the purpose of study, these underlying diseases can be roughly divided into five groups, depending on the manner in which they exert their effect on the heart: 1. The infections. (a) Streptococcus, staphylococcus (the rheumatic group); (b) specific infectious diseases, influenza, scarlet fever, pneumonia, etc.; (c) gonorrhea; (d) syphilis. 2. Degenerations. (a) Arteriosclerosis. 3. Mechanical. (a) Hypertension, nephritis and arteriosclerosis; (b) increased pulmonary vascular resistance, chronic disease of the lungs, emphysema, asthma, etc.; (c) primary cardiac overstrain. 4. Toxic or metabolic. (a) Goiter; (b) obesity; (c) external poisons, alcohol, tobacco, etc. 5. Nervous; general neuroses producing (a) palpitations; (b) arrhythmias; (c) pseudo anginas.

Here again I wish to emphasize the fact that in diagnosis one cannot draw hard and fast lines. There may be two or more of these processes at work simultaneously, and future work may reveal to us that we are at fault in our conception of the method of action. However, this will serve as a working basis at least, for bringing to your attention some of the fundamental details of etiological diagnosis.

The streptococcus and staphylococcus easily rank first not only of infections of the heart but of all causes that produce cardiac disease. This nomenclature is used reservedly as more evidence is needed before we can say that these particular organisms are always at the bottom of these infections. It is used more to designate a class of cases that are very similar in their history than the actual bacteriology behind them. To these organisms or their kind may be ascribed the greater part of all the diseased hearts that originate in children and young adults. That it is not only a local cardiac infection is manifested by the fact that associated with it or preceding it one sees the other evidences of a general infection, acute arthritis, tonsillitis and Sydenhams chorea.

These organisms attack all coats of the heart so that they produce either a pericarditis, myocarditis or endocarditis. Much more common, and especially is this true in the acute stages, there is an involvement of all parts and we are dealing with a combined carditis. Thus in investigating a given case one should be very cautious in ascribing all the trouble to the endocardial lesions and bear in mind that possibly the major fault is in the myocardium. The pathologic process takes place in two distinct stages. The first is the disturbance in the heart due to the active inflammation in itself, the other the resultant damage that remains after the acute process has subsided. Added to this we have the marked tendency of this infection to acute exacerbations and recurrences so that in the fully developed stage we are dealing with a mixture of old and fresh lesions. In consequence of these three factors the cases of this type present themselves with a very wide range of physical signs and symptoms.

Syphilis as the cause of cardiac disease is often overlooked in making the diagnosis. We have learned from the studies of Warthin, Brooks and others that in general lues the heart is affected as much and many times more than the other organs of the body. This organism is selective in its action and seems to pick out the arteries. As a consequence we see its pronounced effect on the aorta and its associated struc-

tures. However, the newer fact that has been brought out recently is that the ramifications of the coronaries are just as much involved in an arteritis and periarteritis. This results in a direct damage to the heart muscle itself. These later lesions have their beginning in a very early stage of the infection, for even during the period of secondaries we find evidence of extensive coronary disturbance.

Our diagnosis then cannot be complete until we have definitely decided the etiological foundation of the cardiac trouble. Then our prognosis is dependent more on the agency which caused the cardiac disturbance than in the structural lesions as we find them in the heart itself.

It is of the greatest importance to foresee the tendency before any actual decompensation occurs. This can only be done by detailed and constant examination of the peripheral circulation. The three methods which are available to the practitioner, estimation of the arterial pressure, estimation of venous pressure, and the application of the so-called functional tests, are usually adequate. No one of these methods is of any great value alone but when taken in conjunction with all the others deductions can be drawn that are comparatively accurate.

Venous pressure can be estimated very easily by an instrument of the Hooker-Eyster type, and it is a great misfortune that it is not more often used. It serves as a check on the arterial pressure readings and when the two are taken together makes both more valuable. In normal people venous pressure is approximately 10 cm. of water with slight variations at different times of the day. In decompensated hearts this pressure never falls below 20 cm. Often it is possible to tell from the general trend of the venous pressure from day to day the extent of the patient's improvement or decline. A sudden rise of venous pressure during the course of a cardiac disease is a very ominous sign and means a rapidly failing right heart.

Dr. Bond's paper was discussed by Drs. Heitger and Baker.

Dr. W. A. Mowry's very excellent paper, "The Importance of a Specified Diet in General Practice," was discussed by Drs. Oliver, Rodgers, Heitger and Baker. This paper will be published elsewhere in its entirety.

Adjourned. H. M. BAKER, Secretary.

EIGHTH DISTRICT

Meeting of Oct. 19, 1916

Regular meeting of Eighth Indiana District Medical Society was held in High Street M. E. Church at Muncie, Thursday, October 19, and was called to order at 10:15 a. m., by President Charles E. Caylor of Pennville.

Minutes of 1915 session were read by secretary and approved by society.

President appointed following nominating committee: I. N. Trent, Delaware; Doris Meister, Madison; P. C. Bernard, Randolph, and Samuel Hollis of Blackford. The committee recommended the following: president, W. A. Hollis, Hartford; vice president, T. M. Jones, Anderson; secretary-treasurer, H. D. Fair, Muncie. The term of the councilor, G. W. H. Kemper, does not expire till 1918, and U. G. Poland was retained as committee on arrangements. Those nominated for office were duly elected.

After the business session Alfred Henry of Indianapolis delivered a remarkably clear and pertinent address on tuberculosis, illustrating his remarks by several patients present and by blackboard diagrams.

The society was fortunate in having for a visitor David Ross of Indianapolis, who led in the discussion of Dr. Henry's address. Others taking part in the discussion were Drs. Trent, Schmauss and Mix.

At 12:15 the members present with their wives and lady friends sat down to a splendid dinner prepared and served by the W. H. M. S. of the M. E. Church.

At 1:15 Ernest V. Smith, formerly of the Mayo Clinic, now of Indianapolis, read a paper on "Diagnosis and Treatment of Carcinoma of the Uterus," dwelling particularly on the Percy cautery method of treatment. This paper was generally discussed.

Following Dr. Smith, W. F. King, assistant secretary of the state board of health, spoke for a few moments on the relation of the public school to public health, and called attention to several bills, in preparation, that are to be introduced before the next legislature.

The discussion was opened by W. W. Wadsworth who referred to the political aspect of local conditions governing our high and common schools.

The society adjourned at 4 p. m.

H. D. FAIR, Secretary.

MUNCIE ACADEMY OF MEDICINE

Meeting of September 22, 1916

C. A. Ball, who recently returned from a trip to the Atlantic Coast, read a carefully prepared paper on "Infantile Paralysis," from which the following points were gleaned: The disease is transmitted by actual personal contact. The virus of poliomyelitis is discharged in the secretions of the nose, throat and alimentary tract of the patients suffering from the disease. Flexner has shown that the virus of this disease retains its virulence when subjected to high summer temperature, to drying or to the action of weak chemicals which destroy ordinary bacteria. Bright sunlight readily destroys the virus. The incubation period of infantile paralysis varies from five to ten days. Fever is probably the most constant as well as the first symptom. As a rule, it is high and of comparatively short duration, falling by crisis or by lysis. Next is a diffuse tenderness over the whole body, most marked in the legs and along the spine. There is also a decided drowsiness and the patient manifests great irritability when disturbed. Meningeal symptoms, such as stiffness of the neck, Kernig's sign, etc., are noted in a fairly large proportion of cases. The deep reflexes may be exaggerated, but usually are diminished or abolished. The grouping of the disease into three classes seems to me to present the most logical classification: 1. These classes are first abortive or nonparalytic. 2. Cerebral type. 3. Bulbospinal with flaccid paralysis. Paralysis is noted in one leg or arm, or may be in all the extremities simultaneously. The lower extremities, however, are involved in four-fifths of the cases. The quadriceps and perineal muscles are most often involved, the muscles of the shoulder and abdomen frequently. Paralysis of the diaphragm and intercostal muscles may occur. Occasionally there is paralysis of the muscles of the back. When death occurs it usually

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takes place on the fourth or fifth day. The mortality is greater in adults than in children. Certainly at least one half of the children recover without any resulting paralysis. Dr. Colliver of Los Angeles describes a new preparalytic symptom, which he thinks has been of great value to him in the early diagnosis. The symptom is a peculiar twitching, tremulous or convulsive movement of certain groups of muscles lasting from a few seconds to less than a minute. It is greater than a tremor, not so constant nor as long as a convulsion, and more regular than mere twitching. It usually affects a part or whole of one or more limbs, the face or jaw, but it may affect the whole body. This symptom appears from twelve hours to three days before paralysis, usually about forty-eight hours before. Since paralysis often follows so quickly after the onset of these symptoms, it would seem that no method of treatment can stay off the paralysis after the onset of the disease. Possibly the so-called immune serum might aid in the rapidity and extent of the recovery from paralysis in these cases. Therefore the greatest hope of success would seem to be in some method of successful vaccination.

W. J. Molloy introduced a young man, a machinist, who has a peculiar affliction. His motor coordination is such that the movements of one hand and forearm are duplicated by the other. When he attempts to feed himself both hands start for the mouth. He cannot hold an article in one hand while releasing a similar object from the other. When the fingers are employed in various activities those of the opposite hand act inversely. For example: If he were tightening the nut on a bolt with the right hand the

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movement of the left would tend to loosen a nut. In writing, both hands begin at the middle of the page and work toward the opposite margins. The penmanship of one hand is an exact duplicate of that of the other, but that of the left is reversed (mirror writing). The patient says that until 6 months of age he had complete motor and sensory paralysis of both hands and wrists. No history bearing on the etiology is obtainable and the diagnosis is baffling.

Adjourned.

H. D. FAIR, Secretary.

DELAWARE COUNTY

Meeting of Oct. 6, 1916

Delaware County Medical Society met in Muncie Y. M. C. A. Building Friday evening, October 6, and was called to order at 8:15 by Vice President F. W. Dunn.

E. V. Boram read a paper entitled "First Class, Good and Poor Fees and Service in Life Insurance Examinations," from which the following abstracts are taken: The examiner for insurance, we must remember, is attempting to ascertain what is best for the insurance company employing him, while the physician's relation to a patient is that of ascertaining what is best for the patient. Insurance companies usually insist that examinations be made in private. It is well known by all practitioners that a third person often prevents free and complete answers to questions asked. Regarding obscure evidence of disease, it is likely a syphilitic history is more often passed over than any other. No doubt some examinations are paid for at a rate higher than is deserved by the service given. Believing that better service on the part of more physicians will open the door to better fees in our work, my plea is that we try to give that kind of service. Instead of real service and scientific work, too many physicians have been trying to put over on insurance companies the kind of work which reacts to the great detriment of our profession. In most instances the companies would pay better fees if enough good service were given them. Let the men who expect to give good service realize its value and refuse to make a poor examination for a poor fee. In looking through medical examination blanks of the better insurance companies now, and comparing them with the ones in use ten or even five years ago, the first great difference noted is the added work and equipment required to make a good examination.

Following Dr. Boram's paper, L. L. Ball, medical director for the Western Reserve Life Insurance Company, presented the subject from a director's viewpoint, saying: Absolute incorruptibility, unflinching honesty, and deep sense of moral obligation are the best vouchers for moral courage. Lacking the last qualifications, a physician must necessarily be a most unsatisfactory examiner, however great his professional skill. A physician acting in this capacity must be prepared to meet occasionally with deceit, misrepresentation, and, hardest of all, misunderstanding. Whatever the breadth of his obligation, he is not the representative of the agent nor of the man seeking insurance, but stands first and last for the safety of the company. The agent who is strong enough to get the examination signed is strong enough to have some weight with the examiner, and this is more likely to be the case if this particular agent is bringing the examiner a good volume of business.

We want our examiner to be loyal to the company; we are glad to have him cooperate with our agents, but that friendliness must in no way influence his judgment relative to the safety of the risk. If a county society boycotts a company which pays a three dollar examination fee on an application for \$1,000, that society should teach its members that it is dishonest and dishonorable to accept five dollars for a slipshod examination, and should see to it that its members are qualified to make a simple chemical analysis of the urine.

H. D. FAIR, Secretary.

PULASKI COUNTY

Pulaski County Medical Society met in special session at the court house at Winamac, Saturday, October 28.

The meeting was called to order by Dr. W. H. Thompson, and owing to the fact that the society had not had a regular meeting for many months, no papers were prepared, but the purpose of the call meeting was to reorganize. Several former members were present, also some who have transferred their membership to other county societies.

Interesting talks were given by Dr. C. E. Linton, Medaryville, Dr. F. L. Sharrer, Francesville, Dr. C. R. Netherton and Dr. G. W. Thompson, Winamac, and a motion was made and carried that the society meetings be held the last Tuesday night of every month, and a committee of three was appointed to prepare a program for each session. The chair named Dr. C. E. Linton, Dr. F. L. Sharrer and Dr. G. W. Thompson.

Dr. Will Shiener, superintendent of the State Laboratory of Hygiene, was present and gave a talk to those assembled, inviting the physicians to make use of the state laboratory, and describing the methods used in making analysis of sputum, blood, etc. The talk was very instructive and the society gave a rising vote of thanks to Dr. Shiener for his kindness in meeting with them.

Adjourned.

C. E. LINTON, Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1916, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

BARIUM SULPHATE FOR ROENTGEN RAY WORK.—Barium sulphate freed from soluble barium salts. This salt passes through the system unchanged and, because of this, is used in taking Roentgen ray pictures of the stomach and the intestines.

BARIUM SULPHATE-SQUIBB, FOR ROENTGEN RAY WORK.—A brand complying with the standards for barium sulphate for Roentgen ray work, N. N. R., E. R. Squibb and Sons, New York (*Jour. A. M. A.*, Oct. 7, 1916, p. 1091).

CHLORAZENE TABLETS, 4.6 GR.—Each tablet contains 4.6 grains chlorazene (sodium paratoluenesulphochloramine). The Abbott Laboratories, Chicago (*Jour. A. M. A.*, Oct. 21, 1916, p. 1229).

PROPAGANDA FOR REFORM

HYDRAS.—The Council on Pharmacy and Chemistry reports that Hydras, sold by John Wyeth and Bro., is one of the so-called "uterine tonics," said to contain "cramp bark, helonias root, hydrastis, scutellaria, dogwood and aromatics" in unspecified amounts. While the name, taken in connection with the composition, suggests that hydrastis is an important constituent, the A. M. A. Chemical Laboratory found this drug to be present in unimportant amounts. The Council finds Hydras inadmissible to New and Non-official Remedies because its composition is semi-secret; because the recommendations on the label for its use in specified diseases and the advertising accompanying the bottle are sure to lead to its ill-advised use by the public; because the claims made for its curative properties are exaggerated and unwarranted; because the name is misleading and because the combination of these five drugs, even if individually they were of therapeutic value, is irrational (*Jour. A. M. A.*, Oct. 7, 1916, p. 1107).

NUXATED IRON.—Nuxated Iron is advertised in newspapers with the claim that it is not a patent medicine or secret remedy. In the popular meaning of the words, "Nuxated Iron" is just as much a "patent medicine" as is "Peruna," "Lydia Pinkham's" or "Pierce's Favorite Prescription." Also, "Nuxated Iron" is essentially secret in composition. While the public is led to believe that the preparation consists chiefly of nux vomica and iron, analyses made in the A. M. A. Chemical Laboratory and elsewhere indicate that it contains much less than an ordinary dose of iron and practically no nux vomica. It is sold under claims that are both directly and inferentially false and misleading not only as regards its composition but also as regards its alleged therapeutic effects. Nuxated Iron is also advertised in the *Medical Brief*, a publication which has for its editor the "medical expert" for the Wine of Cardui concern in the recent case against the American Medical Association and as its publisher one who, through the *National Druggist*, has long been the mouthpiece of the "patent medicine" interests (*Jour. A. M. A.*, Oct. 21, 1916, p. 1244).

PATENT MEDICINES PROSECUTED UNDER THE FOOD AND DRUGS ACT.—The following information was brought out in connection with prosecutions by the federal authorities under that portion of the Food and Drugs Act which provides penalties against misleading, false and unwarranted therapeutic claims: Rayway's Ready Relief was claimed to relieve rheumatism, sore throat, pleurisy, pneumonia and other conditions. The government chemists found the preparation to be a hydro-alcoholic solution of oleoresin of capsicum, camphor and ammonia. Ingham's Vegetable Expectorant Nervine Pain Extractor was found to contain alcohol 86 per cent., opium alkaloids, camphor, capsicum and vegetable extractive matter. It was claimed that this morphine mixture was not only safe and harmless, but positively beneficial when given to teething children. Tetterine was said to be a marvelous remedy for tetter, eczema, etc. Maignen Antiseptic Powder according to the government chemists is composed essentially of calcium carbonate, borax, aluminum sulphate and sodium carbonate. Among other things the exploiters of this powder, which at one time was advertised to the medical profession, tried to persuade the public that the preparation would "sterilize" the stomach, throat, nose, lungs, etc. Green Mountain Oil or Magic Pain Destroyer was found to consist essentially of 95 per cent. linseed oil, with oil of sassafras, oil of thuja, and oil of turpentine, with possibly small amounts of camphor. According to the claims made on the trade package, this stuff was said to be "A Remedy for Diphtheria, Croup, Deafness and Sore Eyes,

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BOOK REVIEWS

MEDICAL AND SURGICAL REPORTS OF THE EPISCOPAL HOSPITAL OF PHILADELPHIA. Volume III. Press of William J. Dornan, Philadelphia, 1915.

This volume was edited by the well-known surgeon Astley P. C. Ashhurst, and the publication of it was made possible by the generosity of a friend of the hospital. It contains the usual report of the board of managers, and so on, and a long list of scientific papers based on the work done in the hospital in 1914-1915. The staff of this hospital is to be commended for getting out such a very good report. The practice of a hospital staff publishing a record of its work which is of more than ordinary interest and value ought to become more popular in this country.

THE MEDICAL CLINICS OF CHICAGO. Volume II, Number 11. (September, 1916.) Octavo, 196 pages, 22 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Price per year, Paper, \$8.00, Cloth, \$12.00.

Again in this volume Abt's talk on "Feeding the Normal Baby with Artificial Foods. Food Preparations" is the most conspicuous contribution. Zeisler's clinic on Acne, Strouse's on "Diabetes in the Young" and "Renal Glycosuria," Portis' on "Syphilis of the Stomach," and Beifeld's on Pernicious Anemia are of unusual interest and value. Friedman's talk on "Chronic Diarrheas," Hamill's neurological clinic, and the other clinics by Williamson, Tice, and Mix are also quite interesting. Internists and general physicians can surely find much of value in this volume.

A PRACTICAL TREATISE ON DISORDERS OF THE SEXUAL FUNCTION IN THE MALE AND FEMALE. By Max Hühner, M.D., Chief of Clinic, Genito-Urinary Department, Mount Sinai Hospital Dispensary, New York City; formerly Attending Genito-Urinary Surgeon, Bellevue Hospital, Out-Patient Department, and Assistant Gynecologist, Mount Sinai Hospital Dispensary, New York City. Cloth, \$3.00 net. Philadelphia, F. A. Davis Company, 1916.

Just as books on organic diseases of the sexual organs are plentiful, so are books on functional sexual disorders rather scarce. Yet this subject ought to get as much attention from every active practitioner as any other subject on functional disturbances, if not more so. The average man is generally quite ignorant of many of the important points relating to disorders of the sexual function. It is highly important for physicians to learn what they can about this subject and to apply their knowledge to the benefit of their patients whenever they can.

In this book one can obtain all the knowledge he

needs. Here the subject of disorders of the sexual function in both sexes is presented by one who has had a broad experience and who does not hesitate to say what he knows in a frank, emphatic manner. The author gives one the benefit of his knowledge and experience in plain words and in an interesting manner. Probably a few more concrete examples of specific cases from the author's experience may have helped to make this book more interesting, but it is certainly good enough as it is.

Two slight errors attracted our notice: majority, page 176, and ligitamacy, page 279.

HOW TO LIVE. RULES FOR HEALTHFUL LIVING BASED ON MODERN SCIENCE. Authorized by and prepared in collaboration with the Hygiene Reference Board of the Life Extension Institute, Inc. By Irving Fisher, Chairman, Professor of Political Economy, Yale University, and Eugene Lyman Fisk, M.D., Director of Hygiene of the Institute. Eighth revised edition. Cloth, \$1.00. Funk & Wagnalls Co., New York and London, 1916.

In this book the authors attempt to emphasize the simple rules of general hygiene that every one ought to know in order to help in the prevention of disease. It is true, as they say, that to the majority of people "To keep well" means merely "To keep out of a sick-bed." To overcome this antiquated notion the proper kind of education must be brought home to every family. In offering this new book they aim to give such knowledge to all those who may need it and seek it. The subject is discussed with that end in view, so that it can be read and understood by any one of ordinary education and intelligence. It is a good book, and it serves a very worthy purpose.

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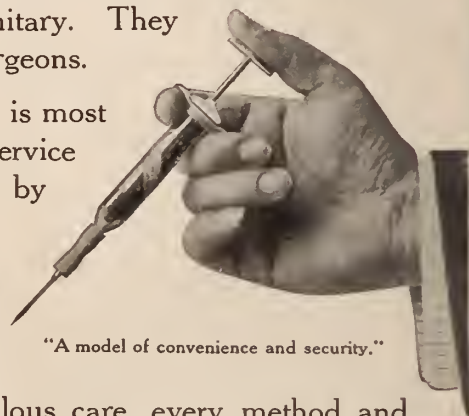
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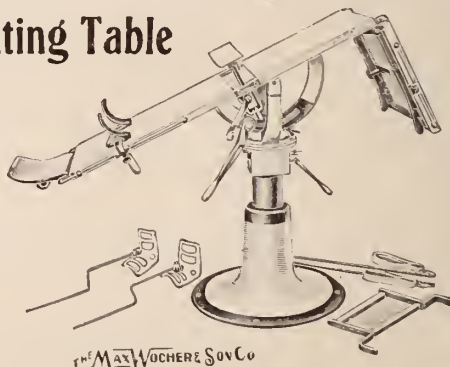
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FORT WAYNE, IND., DECEMBER 15, 1916

NUMBER 12

ORIGINAL ARTICLES

HYPERTHYROIDISM AND ITS RELATION TO CERTAIN PELVIC DISORDERS *

THOMAS B. EASTMAN, A.M., M.D.

Fellow of the American College of Surgeons

INDIANAPOLIS

Within the last few years there has been little in progressive medicine of such absorbing interest as the subject of the ductless glands. The field is virgin, of broadest scope, and of most promising fertility. True it is that much of the reasoning is speculative, much of the evidence circumstantial, much of the knowledge concerning it inductive in character, yet careful observation and renewed physiologic studies have brought out certain facts which cannot but withstand the light which further investigation may shed on it.

Formerly it was held that a woman was a woman on account of her ovaries, but we now know that she is a woman, not on account of her ovaries alone, but on account of her ovaries plus various other glands, plus a proper harmonic relationship between them, particularly ovary and thyroid, and this latter assertion I wish to make the text of this paper.

The thyroid is a sex gland. This is a matter of tradition ages old. The Italians are accustomed to point to the postnuptial enlargement of their daughter's thyroid as an evidence of her antenuptial chastity. The enlargement of the thyroid gland as the ovaries assume their natural activity is a universal observation. Women suffering from hyperthyroidism have no satisfaction in their sexual relations although having sexual desire, and men are almost uniformly

impotent in spite of a strong sexual desire; conditions which, in most cases, are corrected by removal of the hyperthyroidism. That the thyroid is a sex gland may be shown also embryologically, physiologically and biochemically with a high degree of presumption, although in the human the presumption is not so strong as in some of the lower orders. Thompson¹ says:

The statement of Miles F. Porter that "in certain invertebrates the gland is a sexual organ and empties through a duct into the genital tract" suggests the idea that if it were possible to establish an anatomic connection in man or higher mammals, a strong basis for the theory would be established. It is germane, therefore, to trace back the history of the work in this department, and the investigation carries us to the paleontologists, who have found this connection to exist in some of the prehistoric ostracea.

Quoting Gaskell in the same article Thompson¹ says:

The thyroid gland is derived from the uterus of the paleostracean ancestors. In one animal (the paleostraca) the foremost pair of mesosomatic appendages forms the operculum, which always bears the terminal generative organs and is fused in the middle line. In many forms, essential in Eurypteris and the ancient sea scorpions, the operculum was composed of two segments fused together—an anterior, which carried the uterus, and a posterior, which carried the first pair of branchiae. In another animal (ammocoetis) the foremost segments of the mesosomatic or respiratory region immediately in front of the glossopharyngeal segment are supplied by the facial nerve and are markedly different from those supplied by the vagus and glossopharyngeal, for the facial supplies two segments fused together, the anterior one, the thyroid gland, and the posterior hyoid, carrying the first pair of branchiae.

Just as in Eurypteris the fused segment carrying the uterus on its internal surface forms

* Read before the Surgical Section of the Indiana State Medical Association at the Fort Wayne Session, September, 1916.

1. Thompson: Surg., Gynec. and Obst., August, 1913, p. 226.

a long median tongue, which separates the most anterior branchial segments on each side, so also the fused segments carrying the thyroid forms in ammocoetis a long median tongue, which separates the most anterior branchial segments on each side.

Finally, and this is the most conclusive evidence of all, the thyroid gland of ammocoetis is totally unlike that of any other of the higher vertebrates, and indeed of the adult form, the *Petromyzon* itself, but it forms an elaborately complicated organ, which is directly comparable with the uterus and genital ducts of animals such as scorpions.

In the light of recent investigations we know that the ovary has a double function, is really two glands in one—the one having to do with the development of the corpus luteum, the other with the elaboration of an internal secretion. According to Goodall and Conn,² “The former is periodical and elaborated for a special function, the latter varies not so much, is more uniform in its secretion and of longer life than the sexual life of a woman.”

That there is a physiologic relationship between the internal secretions of ovaries and tubes is borne out by all sorts of clinical evidence. The relationship is a reciprocal one, or, to quote Goodall and Conn,³ “These two ductless glands stand in their relation not as compensators but as neutralizers.”

Diseased ovaries may affect the thyroid gland. A diseased thyroid may affect the ovaries.

Those diseases in which we have the close relationship between ovaries and thyroid gland are for the most part such as are classified as functional as against those classified as organic. We have been altogether too much disposed to treat lightly such diseases as were not traceable in their pathology to distinct tissue changes or altogether to ignore and to consider the accepted treatment of such conditions as unworthy of us. But according to Robinovitz⁴:

In the light of modern medicine this position is no longer tenable. To speak of functional disturbances in the sense that they have no pathology is erroneous and unscientific. Progressive medicine teaches us daily that causes other than pathologic tissue changes may be the etiologic factors of disease.

Why shall not the modern clinician, like the psychologist, who is adhering closer and closer to psychophysical parallelism, which carries him in his studies of the mind far beyond what

is done in the physiology of the brain—why shall he not, in his studies of sterility, amenorrhea, dysmenorrhea, idiopathic uterine hemorrhage, precocious or delayed sexual maturation, etc., be carried beyond the confines of cellular pathology into the realms of biochemistry, and there seek solutions for the disorders which have hitherto baffled his antiquated methods of inquiry? These biochemical changes may reside within the generative tract, or in regions remote from it, but to which it is functionally and chemically in close relation.

I have said that the disorders considered in this paper are for the most part functional, and this rule will hold good almost without exception in those cases in which the etiology lies in the thyroid, but not so much so when the hyperthyroidism has its etiology in the pelvic organs, for not rarely do we find an enlarged thyroid with symptoms of toxic goiter associated with definite organic pathology in the pelvis. The citation of a single case will suffice to illustrate this point.

Mrs. L., aged 35, was the mother of four children, the youngest being 5 years of age. Her general history had no bearing on the matter in hand. She was referred to me on account of pelvic pains and menstrual disturbances. Pelvic examination revealed a mass about the size of a hen's egg in the culdesac of Douglas. The left tube and ovary were seemingly normal and the mass behind the uterus was made out to be the right tube and ovary densely inherent to the surrounding tissues. The thyroid gland was considerably enlarged. She had lost weight. She had tremor, and her pulse was rapid and intermittent. There was mental irritability. At that time—about ten years ago—I did not associate the condition in her neck with that in her pelvis and determined to remove the mass in the pelvis, which proved to be a fibrocystic ovary, the coverings of which were much thickened. The tube was highly inflamed. For the first few days after the operation her heart was the source of a great deal of concern to us. However, she recovered and went home. I did not see her for a year, when she returned, saying that she was quite well. I noticed that her goiter had disappeared and on being asked about it replied that she had taken no treatment whatever for it; within three months after the operation the goiter had disappeared completely.

The following case will serve to illustrate the other side of the etiology:

Mrs. S., aged 33, the mother of one child, gave the usual family history, which had no bearing on the case. She was referred to me for excruciatingly painful menstruation and

2. Goodall and Conn: Surg., Gynec. and Obst., May, 1911, p. 467.

3. Goodall and Conn: Surg., Gynec. and Obst., May, 1911, p. 466.

4. Robinovitz: Am. Jour. Obst., August, 1916, p. 178.

menorrhagia. Pelvic examination revealed nothing abnormal except tender ovaries and tubes. However, she had the typical appearance of hyperthyroidism—enlarged thyroid, tremor, rapid pulse, some exophthalmos. Finding no pathology in the pelvis, I reasoned that the source of her trouble lay in the thyroid gland, a part of which I accordingly removed, with the result that her hyperthyroidism not only disappeared, but her menstrual troubles as well.

The two cases, which could be multiplied, serve not only to illustrate the reciprocal pathology, but suggest very pointedly the perplexing question in the diagnosis in a given case, that is, which is cause, which is effect? Manifestly a thyroidectomy will not cure a neoplasm in the pelvis, and I have not observed that the removal of functionally diseased ovaries is a certain cure for hyperthyroidism. How, then, are we to determine on what organ to operate? I do not know. It is largely a matter of that judgment which comes of study, observation and experience. Given, functionally diseased pelvic organs with the classic symptoms of hyperthyroidism, I would thyroidectomize with strong hope of relieving the pelvic symptoms. Given a definite cellular pathology in the pelvis with hyperthyroidism, I would remove the offending pelvic viscera. In some cases both operations may be necessary. I confess I have erred in certain cases and had to follow the one operation with the other, but as I see more of these cases I hope to reduce my percentage of errors.

CONCLUSIONS

1. The ovary is a gland of double structure—the corpora lutea and the interstitial cells.
2. There is a close physiologic interrelationship between the ovaries and the thyroid.
3. In certain circumstances any affection of either one may produce abnormal conditions in the other.
4. Thyroid secretion and ovarian secretion do not supplement each other, they neutralize each other (Goodall and Conn⁵).
4. In our study of disease, particularly of glandular structures, we must not fail to consider the biochemistry, normal or abnormal, involved in a given case.
6. In cases presenting symptoms pointing to both these structures only the most careful study will point the direction of proper surgical attack.

DISCUSSION

DR. MAURICE I. ROSENTHAL, Fort Wayne: The interrelationship between the genital organs and the thyroid is nicely shown in some cases of exophthalmic goiter in which pregnancy takes place. I have had occasion to operate on two thyroids at about the second or third month of pregnancy in women whom I had been watching and in whom I hesitated to operate because of symptoms referable to the heart. In these two cases, between the second and third months of pregnancy, the heart symptoms had become so much better that I deemed it advisable and prudent to do a thyroidectomy. In one case, particularly, that of a woman whom I had watched for quite a while, we had given the rest cure and were considering the advisability of operating, but because of extreme disturbance in the heart, operation was delayed. In her case about the seventh month of pregnancy the heart condition had improved to such an extent that we did a thyroidectomy. She went along nicely with her pregnancy, was delivered, and, at the same time, she had the usual cure as the result of her thyroidectomy. I have had that experience twice, and it is not uncommon to have urgent symptoms of exophthalmic goiter recede during pregnancy.

DR. H. A. DUEMLING, Fort Wayne: The subject opened up by Dr. Eastman is one of extreme importance and great interest to us. The fact is the thyroid gland is more or less closely associated with the sex glands, and this appeals to us in various ways. We all see enlargement of the thyroid gland in young girls at the age of puberty, and we often are called on to pass judgment on these enlarged glands, also when these glands become enlarged in young women who menstruate. These are common things and we pay attention to them, and that was exactly one of the points Dr. Eastman conveyed to us in his paper.

Another point is in further establishing the intimate interrelation between certain functional conditions. In one case Dr. Eastman reports the relation of sex glands to the thyroid glands. He has pointed out very clearly and forcibly that we must be more careful in studying our cases and not be satisfied merely to know that there is enlargement of the thyroid gland. We overlook one great point which must be taken care of in the best interest of thyroid cases; I refer to cases of exophthalmic goiter. Most of us are satisfied, and perhaps have a reason to be congratulated, when we get away with a bad case of exophthalmic goiter, because we must put on ice before we cut them. We have devised various schemes. I would refer here to Crile's method of sealing the gland to reduce the external influences, and to get these patients

5. Goodall and Conn: Surg., Gynec. and Obst., May, 1911, p. 468.

in a condition so that they can be operated on. But that is not all there is to it. When we have removed the glands and have escaped the greatest danger, the next thing is to pay attention to these patients' habits, to change their environment, because it has been my experience, and I think you will bear me out, that after the most skilful thyroidectomy, when you have removed quite a sufficient amount of this gland, and these patients are apparently well for six months or a year, when they go back home and continue their old habits and their old associations they come back subsequently with a return of the disease after a more or less serious operation.

In the territory around the Great Lakes there are many cases of goiter. Outside of the point which Dr. Eastman has directed our attention to it will give us an incentive and stimulate us to look over these cases more carefully and ascertain all of the trouble.

DR. C. H. MYERS, South Bend: I would like to ask any of the members if they have ever observed that a child born from a goiterous mother also had a goiter, and if that goiter had been removed some time in a subsequent pregnancy another child was born without a goiter?

DR. CHARLES M. MIX, Muncie: I have listened with a great deal of interest to Dr. Eastman's very timely paper. This subject of goiter and its relation to the sexual organs, particularly in the female, has interested me for several years. I got my start in my school work in the East along the Atlantic coast, where they do not have any goiter, and during two years' service I saw three cases of goiter, and they were simple goiters. I did not see one case of exophthalmic goiter in New York City. When I came to Indiana I saw the extreme prevalence of goiter.

It seems to me that in trying to get at the bottom of this goiter problem it is well to emphasize certain factors that are causative in this vicious circle of disturbance of the sex glands, perhaps some of the other internal glands of secretion, and particularly the thyroid gland. To my notion there is good evidence, both experimental and clinical, that foci of infection in the tonsils and the teeth, as well as the intestinal tract, may be the activating and underlying factor.

Not long ago I saw an account of a gentleman, I have forgotten his name, who has been working along the line of Rosenow. He has been working on cases of dysmenorrhea from the standpoint of focal infection, and he has demonstrated streptococci in the so-called cystic ovaries—ovaries that were sacrificed on the altar of early gynecologic surgery. The first attempt in attacking the problem was to remove cystic ovaries with the dysmenorrhea, with the

hyperthyroidism, especially in a goitrous region. If that is the case, and it seems to me it is a fact, these patients with dysmenorrhea, with or without hyperthyroidism, often, if not always, have actual disease of the organ, and the cystic condition is a form of atrophy, a form of cystic degeneration comparable to the atrophy and degenerative changes we see in the muscles in cases of arthritis deformans, in which the streptococcus is the active factor. That being the case, it is reasonable in taking up the class of cases that have been mentioned, these early exophthalmic goiter cases in young women, these cases of dysmenorrhea, in which both are associated in varying degrees, to try to eradicate the focus of infection first. I have several cases under observation in which the tonsils are diseased, and about the first move is to get at the tonsils. I have observed that a number of goiterous patients have improved very markedly after tonsillectomy—in fact, almost every patient who has been tonsillectomized, in case we have made correct findings as to the pathologic condition of the tonsil to start with, has been materially improved. In one case I felt we needed to use some vaccine, and I injected two doses of a vaccine containing killed streptococci (a stock vaccine), but my patient, who had improved very much during the first six weeks after a tonsillectomy, immediately relapsed, as far as the size of the goiter was concerned, after a second dose of vaccine. We might go on with profit and thoroughly eliminate the foci of infection in the tonsils and teeth and perhaps in the gastro-intestinal tract, and then have our patients with goiter and incipient hyperthyroidism under observation, and if they do not improve, the vicious circle having become permanently established, a lobectomy or some interference in relation to the ovaries might be properly indicated.

DR. A. C. McDONALD, Warsaw: A few years ago some one—I forget the name of the author at present—called attention to cases of amenorrhea following at times several confinements and associated with a gain in weight, and also following in young girls who had taken on much flesh and had gained perceptibly in weight, and they were always associated with amenorrhea. I have followed up his lead and have given these patients thyroid extract, and I can recall at present possibly half a dozen cases in which there was loss of weight and a free menstrual flow has taken place. I mention this as opposed to showing the connection between the thyroid gland and the ovary.

DR. JOHN C. FLEMING, Elkhart: This paper certainly stimulates us to look at this question in a new light. There is a certain relation between the thyroid, the ovaries, the question of general nutrition and the nervous system,

the details of which have certainly not been solved as yet.

As Dr. Eastman was reading his paper I thought of the question of neurotics. As he analyzed those cases of neurotics, which we know are the bane of all our lives, in whom we can find absolutely nothing on physical examination, it occurred to me that if we question them along the line of sexual function we will find that a large majority of them have an absolute absence of sexual desire. I have reference now to the pure neurotics; they have an absolute absence of sexual desire, or they have some sexual perversion of some kind. But usually it is an absolute absence of sexual desire. As Dr. Eastman said, these patients with hyperthyroidism often have intense sexual desire without the ability to have an orgasm. Then we meet the opposite picture to which Dr. McDonald has called attention—the cold, phlegmatic person, the girl who does not menstruate normally, so that there is certainly an interrelation between these different functions which we do not understand; and inasmuch as Dr. Eastman has called our attention to this question I think it will be the means of stimulating us to look at these cases in a new light. I think Dr. Hertzler, a number of years ago, reported a series of cases of goiter in which the goiters disappeared following a pelvic operation.

DR. H. O. BRUGGEMANN, Fort Wayne: The doctor has called our attention to the fact that the ovaries are not the only sex glands. We must not only consider the thyroid gland, but the pineal gland is absolutely a sex gland. Tumors of this gland have a profound influence on the development of the sexual organism. The same thing is true with the hypophysis. There is a proven relation of tumors of the hypophysis to the sexual organs. We may go on and consider what the relation is between the thymus and thyroid. It was the habit in Rain's clinic to remove the thymus and leave the thyroid in cases of exophthalmic goiter. The same relationship exists between the ovaries and the thyroid, as pointed out by Dr. Eastman. It is not enough, however, for us to study the ovaries or the thyroid, but when we eliminate disease of these two systems, one has to go into the question of the pineal gland, the hypophysis, the thymus, and then the relations become so complicated that at present we are unable to tell which system or which gland is wrong.

I would like to have Dr. Eastman and Dr. Porter or some of the other members who have had more experience than I to tell us what their experience has been along the line Dr. Rosenthal has suggested. I do not recall right now ever having seen pregnancy, except in one case, occur in a woman who had profound

hyperthyroid symptoms. That patient died. I think Dr. Eastman mentioned in his paper that a woman with symptoms of hyperthyroidism was less likely to conceive than a woman who did not have such symptoms, but Dr. Rosenthal has cited two patients in whom the symptoms of hyperthyroidism improved during the second and third months of pregnancy.

DR. MILES F. PORTER, Fort Wayne: Regarding the influence of hyperthyroidism on pregnancy, and vice versa, my experience is in accord with what I have understood Dr. Eastman to say, and also with what Dr. Rosenthal has said. The fact is that many of the things that occur in connection with and seem to be the immediate result of hyperactivity of the thyroid are extremely contradictory. Your patient with extreme hyperthyroidism stops menstruating. She also loses flesh. She goes on until her thyroid is used up; her menses do not return, but her flesh does. A pregnant woman without the thyroid slightly hyperactive, normally hyperactive if you please, is in considerable danger from toxemia or, if she goes to labor, through infection. As nearly as our observations can teach us anything, they teach us that a slight hyperactivity of the thyroid gland is a normal condition to a woman bearing children if she is to carry that child without undue risk. On the other hand, a woman with an extremely hyperactive goiter will have premature hemorrhages and will lose her child. If she has her goiter removed, or a part of it, or her thyroid removed, she regains her health, and becomes the mother of a family. Many of these things seem very contradictory. On the other hand, as illustrating the influence of a slightly hyperactive thyroid in preventing extreme intoxication, I beg to mention the case that came under Dr. Weaver's observation. It is one which I have reported once before of a woman who had had, when she came under Dr. Weaver's care, two, if not three, abortions produced to prevent her dying from extreme intoxication due to her pregnant condition. I suggested to Dr. Weaver that that woman be given large doses of thyroid. She was placed on that treatment, she recovered and carried the child, and it was born at term.

Dr. Eastman in his paper no doubt referred to the embryologic observations which proved beyond question or doubt that originally the thyroid is a part of the generative apparatus, but when we stop to think that there is not anything we possess in the way of apparatus or organism that is not necessarily coupled with the generative apparatus, we would not have any apparatus if we did not have a generative apparatus. So there is another observation that I have made, and the only way of arriving at results will be permanent, and that will be specific, is for

each of us to record our observations accurately in detail, so that we, the observers, will pass them on down to those who come afterward, until by and by we shall have an accumulation of material that will form a basis broad enough and sound enough to draw definite conclusions from. Up to date we do not know enough about the thyroid and its functions to do anything more than browse around the surface, but it is an exceedingly interesting subject. I have a case in mind now. As to the rest treatment in cases of hyperthyroidism, in my judgment one of the strong elements for rest treatment consists in the fact that you separate the young husband from the young wife, get one or the other in a hospital; then you let that husband or wife, as the case may be, go home, and if she happens to become pregnant she gets well.

Dr. Beall will remember a patient he had under has care whom I saw with him. The woman was taken into the hospital shortly after marriage and kept there until all symptoms of hyperthyroidism had materially subsided. I have referred to this case in one of my papers, and I make the suggestion that after this woman was cured by rest and sent home she would likely become pregnant, because of the necessities of the case she would get the sexual exercise sandwiched in with the sexual rest that could come and does usually come to a woman during her pregnancy, she would get well. That woman is today the mother of three children. Her thyroid does not bother her. She remains well. Within three months after her pregnancy she reported herself to me as never having felt better in her life. We must keep careful observations, and as the material accumulates get it together, sift the chaff from the what, and then in twenty years or less time possibly we may be able to tell something about what the thyroid does and what it is for.

DR. EASTMAN (closing): In bringing before you a subject like this, one is tempted to go into the whole thing, that is, a discussion and consideration of all the glands involved in this circle, but that would be an endless task. I had one purpose in this paper only, and that was to call your attention to, or rather remind you of, the interrelationship between these glands and to impress on you the importance of the fact that when you have a case of functional pelvic disease, you should look into the matter of the thyroid gland and see if there is not some trouble there.

DR. PORTER: Just a word more. When we quit doing lobectomies and advise the removal of all the thyroid gland that the individual does not use, then will the percentage of cures of exophthalmic goiter be increased as the result of surgical intervention of this kind.

THE INFLUENCE OF MODERN IMMUNITY RESEARCH ON SURGERY*

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The most striking fact in the field of natural history, as shown by Wallace, Darwin and others, is the almost perfect mechanism of defense which the innumerable species of lower animals have developed against their enemies.

The investigations of these scientists have shown that only those species survive which succeed in developing a defense against natural enemies that protects them from successful attack.

The common pond snail offers an excellent illustration of the type of defensive mechanism of a species evolved through centuries of struggle for existence. The immunity which the shell affords his soft and sluggish body against the attack of enemies, enables the species to survive.

This immunity afforded by the shell of the snail is exactly of the same biologic significance as the immunity developing in an individual of the human species as the result of an attack of typhoid fever. Both are to be viewed as a mechanism of defense against natural enemies of the species, and it is in this broader, biologic sense that the question of immunity in the human race should be viewed. Pathogenic micro-organisms are natural enemies to this species, and the numerous factors grouped under the term immunity constitute the mechanism of defense evolved by the race against these enemies.

To illustrate what is meant by this biologic conception of disease, let us take one of the common infectious diseases, pneumonia. When the invading micro-organism in sufficient number and virulence find lodgment in the lung of the invaded host, the defensive powers of the latter are immediately brought into activity. If the defensive mechanism of the individual stricken with pneumonia be intact and equal to the emergency of defense, we have a series of events precipitated in the vicinity of microbic invasion, having for its object the siege and ultimate extinction of the invaders.

The morbid anatomy which we are in the habit of classifying as the stage of congestion, red hepatization and gray hepatization are

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simply evidences of the combat between the invading micro-organisms and the individual stricken with pneumonia. In the absence of a successful defense, there will be very little local reaction in the lung, the organisms will multiply rapidly and death soon follow. It has been shown experimentally that pneumococci introduced into the pulmonary alveoli of very susceptible animals may pass directly through into the circulation, causing fatal septicemia, without leading to a more than mild and temporary reaction in the lungs themselves. If, however, the resistance of the animal be enhanced by immunization, a considerable local reaction will occur in the lung.

To the great French chemist and biologist, Louis Pasteur, do we owe most for the modern biologic conception of disease. He was not a physician but a scientist, choosing chemistry for his entrance into the Academy of Sciences of France, though he was equally interested in biology. It was on the floor of the Academy that he presented to the scientific world the results of his rigidly careful experimentation in the little laboratory of the Ecole Normale. Beginning with tartaric acid, and then wine and vinegar fermentation, silkworm disease, anthrax, hydrophobia, and finally by a natural sequence, he proved that micro-organisms were the cause of puerperal septicemia and hospital gangrene.

This discovery by Pasteur that surgical infections were due to microbic invasion of the body is the foundation on which modern knowledge of these infections rests, and this discovery was made less than fifty years ago.

Pasteur did not cease his scientific investigations with the discovery of the cause of infectious diseases, but began the study of their prevention and cure. This question he viewed from the angle of a biologist, who studied the life history of minute organisms and the reactions of the body to their activities.

Prophylactic immunization in rabies and anthrax resulted from these studies, thus adding these diseases to smallpox, against which successful immunization had been practiced since the work of Jenner.

Succeeding Pasteur as director of the institute in Paris, Metchnikoff continued to study the perplexing problems of immunity. He likewise approached the field of medicine through the frontiers of another science—biology. Having made a study of the ameba and learned how it appropriated its food by simply enveloping its enemy by protoplasmic processes, and being

familiar with the work of Virchow, who had discovered the leukocyte, it was but a step to apply the knowledge of a biologist to the problems of medicine.

In this way the process of phagocytosis was discovered, and although this theory of immunity has been altered a great deal from its original simplicity, the fact remains that the phagocyte is one of the most important elements in the mechanism of defense which the body has against microbic invasion.

Following Pasteur and Metchnikoff, an enormous number of investigators have given time to the study of the problems of immunity. Some have proposed theories, such as Ehrlich and Vaughan, while others have made isolated observations from laboratory experimentation, such observations adding little by little to our knowledge of this most perplexing subject. From the foregoing it can be seen that medical and surgical thought of today, as far as microbic diseases are concerned, has its source in a science other than medicine, and it follows that the physician who would thoroughly understand the present tendency toward biologic therapy must learn to view the question from the angle of a biologist as well as a physician. Indeed, what is asked of the physician of today is that he make a complete orientation of his therapeutic data, so that his starting point will be, What effect do the remedies which I propose to give in the treatment of this disease have on the normal defensive mechanism of the body?

As to what these remedies will be in a given microbic disease we are still much at sea, but this much seems certain, that any system of therapy directed toward the treatment of diseases of microbic origin which fails to take into account the natural body defenses will not succeed. Such therapy will either do great harm in actually breaking this mechanism of defense or fail to support it at the proper time and in the proper manner. And yet it perhaps is no exaggeration to say that an enormous amount of therapy has been so misdirected, not only in diseases due to microbic invasion but all diseases. As proof of this statement one has only to remember how universal is the custom of treating the symptoms of disease; cough tablets, fever tablets, diarrhea tablets and so on ad infinitum. These remedies are given for the purpose of controlling the symptoms of a disease, but these expressions of disease which we call symptoms are without exception the visible evidence of the working of its mechanism of defense which the body has set in motion for defense against disease.

So far as surgery is concerned, the advances in our knowledge of the laws of immunity has had a surprisingly little influence. The use of antiseptics as a successful prophylactic against infection gave surgery its great opportunity to attack disease directly by the use of the knife, and made of that branch of medicine, far too much, a mechanical art.

When the present European war began and the multitudes of wounded soldiers from the trenches began to crowd the hospitals of northern France, the army medical service awoke to the fact that the treatment of surgical infections had advanced but little since the days of Lister. Practically every wound was infected and the methods of treatment used by the various staffs in attendance, all of which were almost equally unavailing, accurately reflected the chaos of surgical opinion relative to the treatment of wound infections.

It might have been expected that out of the fruitful years of immunity research some more successful method of treating wound infections would have developed, but such seems not to have been the case. It has required the test of thousands of infected wounds to treat, to show the weakness of the methods in vogue, and it appears that the most valuable and far reaching surgical lessons of the war will be found to result from the vast clinical experience and extensive laboratory experimentation in surgical diseases due to microbic invasion. In this connection it will be of interest to briefly review some of the work of Sir Almoth Wright, whose own laboratory as well as many others are devoting a great deal of time to the study of surgical infections. In the opinion of Wright antiseptics have no place in the treatment of wound infections. These agents act indiscriminately upon all the albuminous elements of the wound—bacteria, white cells, serum and tissue cells. Antiseptics are therefore antileukocytic, breaking the normal body defense at a vital point. As the leukocyte is the most important factor in the local defense against infection, any treatment which injures them is fraught with danger. Furthermore, antiseptics have no penetrating power, so that the bacteria lying in the walls of the wound are not reached. He claims that the value of antiseptics in the treatment of wound infections has been based upon fallacious experimentation, such experiments having been too frequently conducted by the exploiters of a favorite drug.

While there is no question, of course, that many of these agents will kill bacteria, when

used on the skin or the hard, smooth surface of instruments, or even virulent bacteria in aqueous solution, it does not follow that they will kill bacteria in an infected wound. In vitro experiments exactly reproducing the conditions of the wound are difficult, so that laboratory reports on the value of antiseptics must be discounted. The mistake has been made of concluding from in vitro experiments that antiseptics would act likewise in vivo.

Wright proposes what he styles the "physiological method" of treatment of wound infections, by which he means the use of such remedies as will cooperate with and strengthen the normal body defenses. For this purpose he uses wet dressings of hypertonic and normal saline solutions. The hypertonic solutions which are of 5 per cent. strength and are to be used early in the infection, acts as a lymphagogue, producing a free flow of lymph to the region infected. This strong salt solution should be used until the induration in the region of infection has disappeared and sloughs separated, at which time the normal saline of 0.85 per cent. strength substituted.

From a series of extremely ingenious in vitro experiments Wright has attempted to reproduce the conditions of the wound, showing the influence of strong salt solutions, both chemical and physical, in the treatment of microbic invasion of the tissues, and whatever may be the ultimate verdict relative to strong salt solutions in the treatment of infected wounds, Wright's searching inquiries into the fundamental biologic and chemical problems of this question will result in great advances in this field of surgery.

What bearing has immunity research upon the treatment of acute abdominal infections such as acute appendicitis, salpingitis and cholecystitis? Let us take the acute appendix as illustrative of this class of cases and attempt to view them more as an immunologist than as a surgeon. For twenty-four to thirty-six hours, roughly speaking, following microbic invasion of the appendix, the bacteria are mostly confined to the lymphatics and lymph spaces of the appendix itself. During this time the appendix with most of the bacteria can be removed with perfect safety to the patient. What bacteria remain are disposed of by the tissues. If, however, the appendix is not removed during this time the original number of bacteria have increased enormously and have begun to crowd the lymphatics of the head of the cecum, terminal ileum and retrocecal lymph nodes. The familiar picture of a seropurulent exudate com-

posed almost entirely of serum and phagocytic cells of fixed and wandering type, is seen in the right abdomen. Fibrin in greater or less quantity glues loops of bowel together.

What if the surgeon attacks the appendix at this time, which, roughly speaking, is the period from forty to seventy-two hours following the initial symptoms. At this time large numbers of virulent bacteria crowd all the tissues adjacent to the appendix, so that in removing the appendix these bacteria laden tissues are frequently traumatized severely. As the result of this traumatization of infected tissues the patient is given an overwhelming dose of what amounts to an autogenous vaccine, composed of living virulent organisms. He might have been able to withstand such a dose had it been his first, but it is his second, he being in the negative phase of his first dose, which he received at the time of the infection of his appendix.

This seems to me to be the cause of a great many operative deaths in acute appendicitis. Auto-inoculation produced by operative manipulation of bacteria laden tissues at a time when the patient is in the negative phase of his original infection, is a more frequent cause of death in my observation in these cases than is a general peritonitis.

The effects of auto-inoculation are constantly observed. Tuberculous patients with mixed infection can easily be made to vaccinate themselves by taking exercise, which manifests itself by an elevation of the temperature. It is also readily observed in an individual with an acute streptococcic infection of a finger. If such an individual whose hand has been immobilized with a splint be allowed to use his finger, it will be found that all the evidences of local reaction increase, as well as elevation of temperature and pulse. Auto-inoculation likewise explains the dangers of cathartics in acute infections of the abdomen involving the intestines. The increased peristalsis produced by the cathartics favors the dissemination of bacteria through the lymphatics and constantly vaccinates the patient with his own organisms. I know of nothing so deadly as the administration of cathartics in acute appendicitis.

If one should outline a method of treating acute surgical infections from the standpoint of the immunologist, a rational procedure would be as follows: First in importance and sequence is physiologic rest to the part or organ infected. This indication is absolute whether the invading micro-organisms attack the finger or the appendix. The entire system of lymphatic and

venous circulation is dependent upon muscular activity for a normal rate of flow. As it is through the lymphatics that microbic invasion is spread it follows that anything that will promote lymph flow outward from the point of infection greatly favors the dissemination of bacteria.

The dangers of microbic dissemination resulting from muscular activity is without doubt well demonstrated in the history of tonsillar infections. Here we have the infected organ, the tonsil, constantly pulled and tugged upon by the muscles of the throat. The lymph from this area, crowded with bacteria, is rushed into the blood stream, thereby explaining the high incidence of endocardial and myocardial complications in this disease.

In the absence of physiologic rest there is a constant process of auto-inoculation occurring, and if the dose be large enough and repeated often enough is sure to result in disaster. In the case of an infection of the upper or lower extremity, regardless of whether there has been bony injury, a splint sufficient to immobilize the entire extremity should be used. A splint is just as necessary to proper treatment of an acute streptococcic infection of the hand as to a broken arm.

In the acute infections of the abdomen rest is obtained by keeping all food, and especially cathartics, out of the stomach, and splint the bowels with a hypodermic of morphin. The demands of the body for water are met by proctoclysis. If the bowels must be emptied a S. S. or milk and molasses enema is not dangerous.

Second in sequence in the treatment of acute surgical infections is drainage. This is an ancient surgical procedure and nothing need be said about it further than, when undertaken it should be accomplished with the least possible traumatization of adjacent tissue, in order to obviate the danger of auto-inoculation. Ample, clean cut incisions, and the insertion of rubber tubes or flat rubber tissue rolled into a wick makes the best drainage material. Gauze should never be used for this purpose.

Wet dressings of hypertonic and normal saline solutions make the best dressing for infected wounds in my experience. These should be covered with gutta-percha tissue or oiled paper to maintain moisture.

The use of a localized active hyperemia is of great service. This may be produced by heat and results in a dilatation of arterioles and an increase in the local defenses, by supplying white cells of phagocytic function, and anti-

bodies in increased quantities at the point of attack. This hyperemia can be produced by hot water or poultices. In this connection it is interesting to note that through the influence of the immunologist the much maligned poultice of the era of antiseptic surgery has come in to its own, and mother can once more apply the ever-ready household poultice to Johnnie's infected foot without fear of censure. Active hyperemia can also be produced by suction cups as proposed by Bier, and is of value in well localized infections such as boils. In the more diffuse streptococcic infections I believe this procedure to be dangerous as it favors auto-inoculation. The passive hyperemia produced by obstructing the venous return by a tourniquet around the limb, is likewise contraindicated in acute diffuse infections and for the same reasons.

There remains for consideration the subject of vaccine therapy. The remedies already proposed for the treatment of acute surgical infections have for their definite object the concentration at the point of microbic invasion, of the already existing defensive powers of the individual. By vaccine therapy it is proposed to increase the total defensive powers by a stimulation of the hematopoietic organs. This is the supreme test which clinical medicine and surgery demands of vaccine therapy.

On account of the revolution in our ideas concerning biologic therapy, just now going on, it would be impossible to discuss this subject with any degree of completeness. Since its inception this theory has been built upon the laboratory dictum of specific antigen, antibody reaction—that is, if one wished to get an antibody response, he must use an antigen in his vaccine of the same strain of organisms that caused the infection. It is true that this dictum of the laboratory has been pretty generally disregarded in practice, but always over the protest of the laboratory workers.

However, there has accumulated a considerable amount of reliable clinical data, and recently laboratory evidence, that antibodies may not be dependent upon a specific action for their production. Wright, than whom no one has been a more consistent advocate of the use of autogenous vaccines, recently made this significant remark, "And let me here recall to you that attention has, in connection with inoculations against plague, typhoid fever and pneumonia, been time and again called to the probability that these vaccines give some protection against diseases other than the particular dis-

ease which the inoculation was designed to ward off. . . ." And I think all those who have had much experience of vaccines will have seen cases where therapeutic effects lying quite outside the range of the particular vaccine employed, and therefore, as we thought, not quite creditable to science, have been obtained by vaccine therapy.

It would therefore appear that with a versatile salesman on one hand, and a confused array of scientific facts emanating from laboratory and clinics on the other, the general practitioner finds himself swept into the current of biologic therapy without a compass.

As far as surgical infections are concerned, the theoretical indications for vaccine therapy are limited to two conditions: First, as a prophylactic immunizing agent in suspected wounds, second, in chronic infections.

In the former case such prophylactic immunization is theoretically possible, that is, the defensive powers of the body may be stimulated to increased activity in advance of microbic growth. This is the ideal in all biologic therapy and if it could be realized in surgical infections, would give us the same control over these diseases that we now have over typhoid fever, tetanus, smallpox and hydrophobia. I believe the procedure to be sufficiently logical to warrant the administration of vaccines as a prophylactic in badly lacerated wounds, especially compound fractures.

In chronic surgical infections vaccines have been most generally used. This class covers a wide variety of conditions—old sinus tracts, bone necrosis, fistulas, etc. In such conditions the body defenses are supposed to be weak or dormant. It will be found, however, that if sequestra of bone be removed, strictures and obstructions which prevent the proper flow of contents be attended to, and dead spaces in large cavities be obliterated, that most of the conditions coming under the head of chronic infections will heal.

Summarizing the influence of immunity research upon surgery, in a word, we would say that the problem of surgical infections has been shifted to the field of biochemistry; that we now recognize that when an individual becomes the host of pathogenic micro-organisms, his entire physiochemical balance has been disturbed; and that under such conditions, recovery is to be sought by a resort to those remedies and measures which strengthen and stimulate normal body defenses.

THE INFLUENCE OF MODERN IMMUNITY RESEARCH UPON MEDICINE *

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The past quarter of a century has seen a great development in the field of medicine. A large per cent. of this advance has been along lines which give us a broader knowledge of the principles and processes of infection and immunity. During this period, following in the footsteps of Jenner and Pasteur, have appeared a great number of scientists whose names are and will be recorded in medical history as leaders of their time. From the efforts of these men an enormous amount of literature has accumulated, new theories have been advanced, necessitating the production of many new words and terms. Taken in all, the subject has assumed such a complex nature, that any one not especially well versed along these lines will find himself in quite a tangled up position when trying to explain such conditions to his patients.

It is my aim in this paper to set forth as clearly as possible, a summary of our knowledge of infection, the method by which the body protects itself against infection, and the methods it uses to overcome the infection, should it occur.

Whenever micro-organisms have entered or passed through the barriers of the skin, or mucous membrane, and have multiplied in the tissues, we have an infection. Thus, we see, we must consider the proposition from two viewpoints, namely:

1. The offensive forces of the invading organism.

2. The defensive forces of the host.

These two factors are inseparable in determining an infection.

Among the former, we must consider all the forces of a disease producing nature, the power an invading organism has of defending itself against the defenses of the host, and the power of growing and thriving under adverse conditions. Chiefly among these, we must consider toxicity, aggressiveness, the influence of one infection upon another, etc. The latter is mainly dependent upon certain physical nonspecific local factors, chiefly among which is the resistance of the skin and mucous membrane, and also to certain more or less specific antibodies. The former has more to do with the process of

infection, while the latter is more concerned with the subject of immunity. We know that micro-organism and host may live together in relative harmony, due to the ability of the host to control the organism and its products, or due to the absence of aggressiveness or infectivity on the part of the organism, until the resistance of the host is lowered or the virulence of the organism is increased, when the neutral relations are disturbed and infection occurs.

Immunity, in its broadest sense, is the effective resistance of the host against any deleterious substance; in the usual and more restricted application, the term is applied to the resistance of the host to infective micro-organisms and their products.

Natural immunity is the resistance to infection normally possessed, usually as the result of inheritance. It is an extremely variable condition, being more relative, seldom absolute, and is often times dependent upon nonspecific causes.

Species immunity is that type of natural immunity possessed by one species of animal to diseases peculiar to another species, such as immunity of man to hog cholera.

Racial immunity is that type of natural immunity existing among members of the same species. For instance, negroes are immune to yellow fever. However, there has been much argument over this question and well-marked examples of it are very rare.

Individual immunity is that type of natural immunity whereby one animal is not susceptible to diseases peculiar to its own species. For instance, certain persons may not be susceptible to scarlet fever or mumps.

Natural immunity may be due to many and varied causes. Chiefly, among the nonspecific factors, are integrity of skin and mucous membrane, chemical action of various body secretions, peculiar route of entry to the body, etc. Certain tissues seem to possess a local immunity to certain infections; for example, *Trichina spiralis* affects only muscular tissue; diphtheria never passes down the esophagus, yet may spread in other directions.

The age of the individual as a cause of natural immunity must not be forgotten, as we know that the scalps of children are very susceptible to ringworm, yet it is seldom seen in adults; also, that infantile vaginal mucous membrane is very susceptible to the gonococcus, while in the adult it is immune.

Phagocytosis is a cause of natural immunity as we may see in any local inflammation, the

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phagocyte plays a demonstrable part in overcoming the successful invasion.

Again, after the successful invasion of the body by a micro-organism or its toxins, no harm results because of a lack of suitable receptors for union with this pathogenic agent, is a cause or phenomenon of natural immunity—or, we may have a natural antitoxin immunity due to a long association with a micro-organism, although we must in these cases rule out a previously undiagnosed attack of the disease in question.

A natural immunity may also be due to the presence of ferments which destroy the bacteria on invasion, as well as to a lack of ferment necessary to break down the tissue cells of the host, thus causing a lack of suitable nutrition for the invading organism.

Acquired immunity occurs in two distinct forms—active and passive. Active acquired immunity is that form of resistance to infection brought about by the activity of the tissue cells, as a result of having had the disease in question, or as a result of artificial inoculation with a modified or attenuated form of the causative organism or its products. This immunity may be gained by accidental infection or it may be gained by inoculation with living organism at a time of good health. This method is now employed only in veterinary medicine for obvious reasons, but has been extensively used by the human race in former times, in fact, being one of the basic facts upon which our knowledge of immunity is founded. A third method is by vaccination with the attenuated virus of the organism.

Passive acquired immunity is that form of resistance which depends upon defensive factors not originating in the animal protected, but passively acquired by the injection of serum obtained from an animal that has acquired an active immunity to the disease.

Pasteur's theory of exhaustion was one of the first theories advanced to explain these phenomena of immunity. He concluded that the invading organism used up some substance in the body, essential to its existence. About the same time appeared the retention theory of Chauveau, followed by Fodor, both of whom endeavored to explain the phenomena by saying that the host infected with an organism produced certain substances which accumulated in the body fluids and these substances exercised an inhibitory influence on the growth of bacteria and their products. In 1883 Metchnikoff advanced his cellular theory, after making a

series of studies on the part played by certain body cells in overcoming infection. This became known later as the "theory of phagocytosis," while Fodor's theory, after many observations and experiments by Ehrlich, became known as the "side-chain theory."

A more recent theory advanced by Vaughan explains all forms of immunity by the inability of a micro-organism to grow in the body of the host, because of the presence or lack of certain ferments which either destroy the organism directly or prevent it from obtaining suitable nutrition. When we try to compare these theories, we find that they differ only in minor details and that the fundamental principles are the same, being one complex set of phenomena viewed from different angles.

In vaccine therapy we have to deal with the phenomena of active acquired immunization, and we must consider this from a prophylactic as well as a curative standpoint.

The diseases for which vaccine therapy has been of most service as a preventative measure are smallpox, rabies, and more recently typhoid fever. I think all will agree in the efficacy of vaccination as a prophylactic in these three dreaded diseases. In several other diseases many probably well observed cases have been reported in which much credit has been given to prophylactic vaccination. On the other hand, we know very little of the failures or the causes of these failures, yet these causes are being worked out, and I believe that in a short space of time we shall realize a greater value of vaccines as preventative measures.

In curative vaccine treatment, there is hardly a disease of known bacterial origin but has been treated with vaccines of some kind by several different men. The results in some of these cases seem most satisfactory, in others the results have been of doubtful value, and in some severe damages have resulted.

In certain localized infections many reports are available which show the efficacy of curative vaccine therapy. But in these cases can we state that these favorable results are due entirely to any one class of specific antibodies? The consensus of opinion is that the defensive action in these cases is multiple rather than single, and it is probable that in this class the action of a vaccine merely controls the infection and keeps it from spreading to other tissues.

In general infections where the tissues of the body are already loaded with toxins, we believe in the majority of cases the use of vac-

cines to be contraindicated. Are we fair to our patient when we introduce such toxic substances into the body already overwhelmed by an infection? This is indeed contrary to an enormous amount of literature, particularly upon typhoid fever, but who can say definitely that the action in these cases is due to specific antibodies? We know that every case is a law unto itself, and we have no way of interpreting or knowing at the time the virulence of the organism and can only speculate on the resistance of the patient. Perhaps some will say that due to the extreme toxemia, the antibody tissue forming cells are, so to speak, paralyzed, and if such be the case then, and only then, vaccines may be indicated.

In border-line cases vaccine therapy is indicated until the infection becomes general. Yet in these cases, we must be very careful not to destroy the balance between the aggressive and defensive forces, thus converting a local infection into one of general septicemia, which I believe is sometimes true.

In judging any kind of treatment, we must not forget the course of untreated cases. As we note the more clinical possibilities and manifestations in the untreated disease, the more careful we must be in drawing our conclusions from the course of treated cases, and therefore in forming our conclusions, it is necessary to observe a series of a large number of cases. Disregard of this principle in the use of specific therapy has led to erroneous statements both by physicians and manufacturing houses, and I believe that this practice has led to more harmful effects than any other one thing in the practice of medicine.

An amelioration of symptoms is the only evidence of the success of a given therapeutic measure. If improvement occurs regularly after a series of cases in which, if untreated, improvement does not appear so quickly, then we can say that the method has a therapeutic value.

The recorded observation of a clinician must of necessity carry weight in proportion to his power of observation, the number of cases reported and the time at which such reports are made. We must also remember that it is the tendency to report only our successes and to forget our failures.

Clinical evidence becomes of value for and against vaccine therapy only after the study of a large number of cases with adequate controls, and under the supervision of competent observers.

Animal experimentation has proven of great value in testing out the efficacy of specific immunization. But here we must take into consideration the idiosyncracies of the animal to the infection. Here again we can accept evidence for and against specific therapy only when carried out in well equipped and well regulated institutions under the supervision of competent men. A combination of these two methods is the best and most conservative way of arriving at trustworthy conclusions.

We wish to emphasize that even a very carefully prepared vaccine is capable of doing much harm if given in excess or otherwise administered, haphazardly. We must not over stimulate the tissue cells or we will do actual harm and this is the main reason why vaccines should be used very carefully if at all, in generalized infections. In therapeutic active immunization, evidences both for and against should be weighed carefully by one who is competent to judge harmful as well as good effects, guarding his dosage and interval between doses so that he will only aid nature by stimulating in the interest of the infected tissue, the unexercised immunizing capacities of the uninfected tissues.

In summing up the evidence for and against curative vaccine therapy, I can do no better than quote the words of Theobald Smith: "All parasites or micro-organisms tend to increase the resistance of the host in which they live and multiply. Out of this universal fact, a number of practical problems arise. In any given disease is it worth while to try and raise this immunity and how much energy will it cost the patient? If worth while, what is the best and most sparing way to the patient of raising this immunity artificially?"

In any localized infection we must ask ourselves, is this a beginning process without attendant immunity or is it a residual process associated with general immunity? If the latter, then vaccines may be considered safe. In processes associated with fever and bacteremia, science says, hands off, until we know whether or not we have a progressive disease with gradual undermining of the patient's resistance, or a more localized infection in which excursions into the blood stream are secondary. In any case, the use of vaccines in these cases must be regarded experimental as yet, and should not be undertaken save by one trained in the problems of immunology. Judging from this point of view as well as from the work of the laboratory, we should say that vaccines applied during the disease will be rarely, if ever, life

saving, but they may hurry a stationary or languid process which tends toward recovery by bringing into play the unused reserve of the various tissues of the body."

The dosage and interval between doses of a few vaccines used as prophylactic measures has been fairly well settled in the following diseases, smallpox, rabbies, and typhoid fever. In these infectious diseases, the dosage and interval between doses, if more than one is necessary, have been established by long continued observations by competent observers and also by animal experimentation. In regard to dosage and interval dosage in the treatment of disease, we know nothing definitely. The opsonic index seemed for a time to be the solution of the problem, but this has fallen into disrepute because of its uncertainty. Likewise, for the same reason, the negative phase is of no value. Each case is and should be considered a law unto itself. Severe reactions should be and must be avoided if favorable results are to be expected, because there is always the danger of breaking down the residual forces of immunity of the host. There has been quite a dispute over this point, some observers arguing that the least possible reaction is the optimum, while others argue that more marked reactions are advisable. In general, if there is any question as to the strict localization of the process, any reaction should be the indication for the dose to be decreased and the interval between the doses to be lengthened. We should, then, I believe, begin with very small doses, gradually increasing up to the point where a reaction follows the injection. Then this dose should be continued at the same interval as long as conditions remain the same.

The contraindications for vaccine therapy, either curative or preventive, are practically none when the vaccine is properly prepared and judiciously given, except in the presence of advanced cases of tuberculosis, cancer, diabetes and nephritis. We must not treat these cases blindly, for the possible harm caused to the patient may be greatly overbalanced by the ultimate good, and if such be the honest opinion of the physician, then the vaccines are indicated.

In the selection of a vaccine, each case must be treated individually. In the human host, we must not for very obvious reasons use a living vaccine, although according to theory this is the ideal way to produce a high and lasting immunity. In choosing between an autogenous and a stock vaccine, we must remember that both have their good points. An autogenous vaccine is ideal in that it conforms strictly to the

laws of immunity. In using an autogenous vaccine, the physician gives his patient a thorough examination in order not to overlook any hidden focus of infection, which we know must be treated otherwise if our treatment is to be successful. On the other hand, autogenous vaccines are more expensive and require a well-equipped laboratory, skilfully maintained and from five to seven days for their production. Stock vaccines are cheap and available at once, yet they have the disadvantage that they may not be of the same strain as that of the infecting organism, and hence will do little good. To overcome this, we have our so-called polyvalent vaccine, which is a sort of "shot-gun" prescription, and may do some good, while on the other hand, it may cause considerable harm.

Sensitized vaccines are merely an attenuated form of bacteria, and in the hands of several observers have given good results, with no reports of any undesirable effects.

The permanency of active immunization varies from a few weeks up to several years in different diseases. An acquired immunity produced from having had the disease is most often the more lasting, and an immunity caused by a vaccine of living organisms will give us a higher and more lasting protection. It follows, then, in logical sequence that the nearer we imitate Nature with our prophylactic vaccinations, the higher and more lasting will be our protection. In explaining the short duration of some active immunities, we can only advance the theory that the immunizing bodies—whatever they may be—are of such a chemical nature as to be destroyed or excreted by the body cells more readily than other immunizing substances. In some infections one attack produces no lasting immunity, but even a susceptibility to the disease may be acquired. We can explain this by the fact that the first infection did not produce an excess of immune bodies, and in addition used up or in some way caused a decrease in some of the inherent factors of the patient's natural immunity.

In serum therapy we are dealing with the phenomenon of passive acquired immunity, or, in other words, the immune bodies or protective substances are formed by a process of active immunization in some animal or in some other person, and are then passively acquired by being injected into the person to be protected.

Similar to vaccine therapy, serum therapy is used both to prevent and to cure infections.

For the purpose of prophylaxis, only two and possibly three immune serums have proved their efficiency, those of diphtheria, tetanus and pos-

sibly an antiplague serum. The antibodies introduced by means of a serum represent a foreign protein, and accordingly the body eliminates them very rapidly. Hence the immunity is highest at the time of injection and becomes gradually less each day until finally no immunity remains. Immunity thus produced usually lasts from three to six weeks.

In curative passive immunization the conditions are indeed changed. Here our body cells are actively engaged in combating the invading organism so that specific antibodies injected in the form of an immune serum act as much-needed reinforcements in overcoming the infection. In only a few infections, however, has this method of treatment been of much success. In diphtheria, tetanus, epidemic meningitis, and more recently in generalized streptococcal infections, results are favorable. We must consider each antibody as specific to its antigen—yet, practically speaking, we can class immune serums into two classes, antitoxic and antibacterial; antitoxic immunity for the true or extracellular toxins, and antibacterial immunity for the endobacterial or bacterial-fast toxins.

The antitoxic group produce excellent results, due to the fact that the toxin in these cases is free and ready to enter into combination with the antitoxin immediately. In the antibacterial group the process is complicated in that the toxins, while destructive or poisonous to the host, are not of such a composition as to be neutralized by our present-day antibacterial serums. The solution to this difficulty is, however, being worked out, and I believe it will only be a short time until we shall possess antibacterial sera as potent as antitoxic sera are now.

The chief contraindications for the use of serum lies in the serum itself, in that we are injecting a foreign protein into the body. In the great majority of cases, we believe the injection of a carefully prepared and properly administered serum to be without grave danger to the patient. The phenomena of anaphylaxis which occasionally occurs after the injection of serum is the most dreaded of complications. Considering results in the number of cases so treated, we believe that the fatalities from anaphylaxis should not be a contraindication. If the following points are given attention, we can often eliminate grave complications. Is the patient sensitive to horse protein? Does the patient suffer from asthma? Is the general condition such as to withstand the effects of the injection? Has the patient been injected with serum

before? If so, the serum the second time should be from a different species if possible, and should not be given intravenously, but subcutaneously or intramuscularly.

Among the more recent observations and conclusions regarding specific therapy, I will merely mention the following:

Matthes in 1895 proved that the reaction produced by tuberculin could be duplicated with dextro-albumose. More recently Frankel and others have demonstrated the therapeutic effects of typhoid vaccine in typhoid fever. Rumpf has demonstrated equally favorable results with a vaccine of *Bacillus pyocyaneus*; Blach reports a series of cases of lues favorably treated with tuberculin; Krause reports a series of cases of typhoid treated with colon vaccine with a lower mortality, and likewise calls attention to improvement of pelvic infections, due to colon bacillus, treated with typhoid vaccine; Luedtke administered deuto-albumose in typhoid with good results; Ichikawa reports paratyphoid treated with favorable results by typhoid vaccine; dermatologists have had good results in the exanthemata by the injection of foreign protein; Becht and Leuckhart have proved conclusively that circulating antibodies are not derived from tissue cells in general, but originate in the blood-forming organs; Bull has shown that we do not have negative phase following injection of typhoid vaccine, but an increase in antibodies immediately; Dunklin showed the same phenomena, using albumose solution; Gay and Claypole demonstrated hyperleukocytosis following intravenous injection of typhoid vaccine. It is common clinical experience that some diseases, notably chronic joint conditions, dermatosis, sarcoma, etc., improve after some febrile conditions in which high temperatures are registered. Smith recently reports a number of cases of gonorrheal complications treated with gonococcus serum and with normal horse serum in which severe anaphylactic phenomena have occurred with good results, and asks the question, "Can allergic phenomenon be a therapeutic agent, and if so, is it worth the price?"

That the essential processes causing these beneficial results and phenomena just mentioned are more or less essentially the same is very probable. Here, as in other biologic phenomena, we are dealing with complex reactions, and while probably a great many factors are responsible for the conditions that tend to promote recovery, then can we not say that the specific stimulus causing these phenomena is due to the action of a foreign protein?

DISCUSSION OF PAPERS OF DRS. HADLEY
AND DANRUTHER

DR. V. H. MOON, Indianapolis: The subject which has been brought before you this morning by the two essayists is one which lies at the very basis of our knowledge of the management, care and treatment of patients suffering with disease in many of its forms. The first essayist has given us a very clear idea of many of the means which can be applied surgically to aid in the reparative process, for we must understand that inflammation is a reparative process—it is the reaction of the body against an injurious agent of some type. Adame has well said that in order to cure inflammations we must increase them. In other words, in order to facilitate the process we must increase—or we can do no better than to increase the process. So the means which have been suggested for that, such as free incision of a surgical infection to facilitate drainage, simply means that we are allowing an amount of waste material, of infective material, to escape externally which would necessarily have to be absorbed. The application of hypertonic saline solution dressings to an infected wound facilitates Nature's own process of eliminative flow for the cleansing of the wound and the carrying out of infective organisms to the externum. So also the application of heat facilitates local drainage which will free the infection, and all these means aid in the surgical facilitation of resistance.

The subject of immunity with relation to medicine, of course, is very closely allied with that of surgery, because medicine and surgery are not essentially separate fields, but have to do with the same processes that govern every infection in the human mechanism. The paper of the second essayist has been carefully written in this regard, that a definite statement of points where there might be question has been in most cases avoided, and hence it does not raise definite questions and does not lend itself with the greatest facility to scientific discussion.

The specificity of immunity is a subject which has been touched on by each of the essayists, and lies at the very foundation of a large amount of treatment of infectious disease. We know from the researches of Vaughan, Abderhalden, Jobling and others that infectious disease is really a protein intoxication; that the micro-organisms produce these diseases by producing a type of foreign protein within the system; we know that 85 per cent. of the dry weight of bacteria is protein substance; we know the effect of introducing a foreign substance into the body, and Vaughan has been able to reproduce typhoid, nephritis and many other forms of clinical symptoms simply by the introduction of varying doses and varying types of foreign protein. It has been further demonstrated that an animal which is immune to one type of protein is not immune nor sensitized to another form.

In other words, his immunity is specific to that type of protein. This principle has been established beyond contradiction, so much so that these tests are of the greatest reliability in medicolegal matters pertaining to specificity of blood. We have an example of that same principle in our infectious diseases. It is hardly necessary to call your attention to the fact that a patient who is immune to typhoid by having had an attack of typhoid is not immune to smallpox, cholera, pneumonia or any other type of infectious disease. With these principles in mind we cannot escape from the conclusion that there is a specificity of immunity, and in applying that principle to our treatment, if we are attempting to establish an immunity by therapeutic means, such as the application of vaccines, we must bear in mind that there is a specificity, and if we expect to raise the immunity of the patient against a certain type of infection we will use the causative organism of that infection as our antigen.

Now there are questions which cannot be answered at the present time regarding this specificity. Several of these have been brought out by the essayist who has just left the floor—the matter of the treatment of typhoid fever by the introducing of a protein other than that of the organisms causing typhoid fever, and so with a number of other infections. The best we can say regarding that manifestation is that the research findings of men investigating in this line of science have not explained this occurrence of apparent nonspecificity with immunity.

I should like to go further into the discussion of this, but time will not permit. Let me say this: Vaughan's theory—and the theory of many which coincide closely—is that the micro-organism produces a ferment in the system which causes destruction of the foreign protein. The ferment will act specifically on that type of protein which was used to call it forth. Vaughan also believes that the same toxic nucleus is present in all proteins. In other words, that the protein differs not in its toxin, but in the other portions of its molecular structure. A ferment which cause the destruction of the typhoid bacillus must have a specificity for that particular protein in order to accomplish the primary cleavage of the toxic molecule of the typhoid protein; but after the primary cleavage has been accomplished it is possible that the same ferment which would cause the cleavage of the toxic molecule of pneumonia would also cause the cleavage of the toxic molecule of the typhoid bacillus, if the toxic molecules of the two were identical. This explanation is not offered by any men whom I have read on this subject, so I do not give it to you authoritatively; I simply offer it as the best explanation of the failure of specificity in certain of the examples which have been cited.

(Dr. Truelove not being able to be present.

sent his discussion, but the president ruled that a man must be present to read his paper or take part in a discussion.)

DR. GEORGE SPOHN (Elkhart): I would like to ask the first essayist a question. He referred to appendicitis. Take a case where the appendix is removed—there is the infection existing before the operation. Would there be any advantage in using antitoxins?

The second essayist spoke of immunity—that one person is immune against disease one time and another time is not immune. What is the difference? The child ordinarily is not immune to scarlet fever and diphtheria, but the adult is. What is the difference? What is the change from childhood to adult life that makes the difference in immunity? Also I wish he would bring out a little more clearly the difference of immunity, and why it is that one person is immune to typhoid fever or any of the other infectious diseases, and another person is not immune?

DR. LEONARD F. SCHMAUSS (Alexandria): Dr. Hadley gave us an excellent paper, and I think the principles which he emphasizes ought to be encouraged; but I simply get up to caution against going to the other extreme. In other words, I would not like the idea to go out that he absolutely discouraged the use of antiseptics that have given us good results in the past and will in the future if we use them where indicated. There are many instances where we cannot practice aseptic surgery, but where antiseptics will give desirable results. In regard to infected wounds, I think none of us would want to forego the use of antiseptics in these cases, and take say a contused wound of the hand, I think it would be foolish to disregard such procedure and then depend on the application of salt applications on the outside to draw away the infection. The same applies to acute appendicitis. We all know there is an acute condition of the appendix and surrounding tissues, and if we handle that cecum and colon we are liable to increase the trauma; but as a rule at least 98 out of 100 of these acute conditions will subside if we remove the offending structure, and operation should be carried out at that time.

The same often applies to abscess formation. A great deal of harm I think has been done by the average practitioner who gets the idea that if you do not operate during the first twenty-four hours you should wait until an abscess forms. If we are going to operate, operate during the developmental stage; it is distinctly safer than to wait a week or ten days, taking our chances on a lot of complications which are apt to develop.

I would like to mention the Ochsner treatment in acute appendicitis. Many lives have been saved by that treatment, and we all know that thousands of cases have been sacrificed by

that treatment because operation was put off and put off until an abscess developed and the patient was lost. I think the general condition of the patient is of more importance than the local condition, and we should go in at any time the condition of the patient is favorable, rather than depend upon medication and a great many new-fangled ideas—many of which are very good—but we should not lose sight of the methods which have been tried and which have not been found wanting.

DR. GEORGE T. MCCOY (Columbus): In my opinion we have not had two more interesting and valuable papers before this society in a number of years. I always remember the effect that the doctrine of phagocytosis had on me when it was first promulgated by Metchnikoff. I never read anything more interesting than that, and these two papers are indirectly vindicating the doctrine of Metchnikoff—the doctrine of the leukocytes. It was said then by someone that all that was needed to protect the human body from disease was to educate the white blood cells. There is more truth than humor in that. The doctrine of vaccination in the prevention of disease is far more important than the doctrine of cure, and I think our success in prevention will be much greater than in the use of vaccination for cure.

One doctrine brought out by the first paper was the local infection of all our diseases, especially pneumonia. I well remember when I began to practice that we never thought of infection applied to diseases like pneumonia. Now we can say we have no disease that is not the result of infection somewhere. Our pneumonia forty years ago was a lung fever, simply. It was treated as a lung fever. Today we know it is a local infection, and the doctrine of the paper is to cut off that local infection or if possible limit your disease to the first area in which it appears.

I think the vaccination treatment of disease is a very valuable treatment, but the danger is in carrying it too far, encouraged by pharmaceutical chemists and others interested in a commercial way. A careful use of carefully selected vaccines in the prevention of disease, as in typhoid fever and some infections that are liable to come up in war surgery, is a good thing. I think study along that line will be worth while to every one practicing medicine. I am passing off the stage myself, but I have many young friends in the profession and I will be glad to know they are working along that line.

DR. MURRAY N. HADLEY (closing): The question was raised as to the possible value of the use of vaccines in acute appendicitis, that is, in that stage where the appendix can be removed with possibly the residual organisms in the region of the appendix. I think that involves the use of vaccines in all acute infections. If you agree that the use of vaccines is

indicated in an acute surgical infection, you would use it under those circumstances. It seems to me not to be a wise thing to do, when we remember what we propose to do when we give the vaccines. We propose to repeat the biologic processes that have already just occurred. That is, the individual has had one dose of vaccine when he got his acute infection, and we propose to repeat the same thing in a short time by giving him another dose. It is conceivable that there might be some reason why the individual would not respond properly to the first dose of vaccine, but whether or not his failure to respond to the first would be overcome by giving him a second dose of vaccine, I think is problematic, and I think it probably would not be in accordance with the fundamental principles of biologic truth to give him this vaccine under those circumstances.

Now, as to the question of antiseptics, this must be more or less governed by the facts of the case. There has been some confusion of ideas relative to antiseptics. We know, of course, their absolute necessity and value as prophylactic agents. You treat all your wounds at first with antiseptics, but the problem before you at that time is altogether different, biologically and pathologically, to what it is forty-eight or seventy-two hours after. Then the organisms are scattered all through the tissues and the problem of using an agent in the combat of that infection at that stage is very different from the use of an agent to kill the organisms in the first stage of the disease, or before the organisms begin to grow. The time limit in the treatment of infected wounds is just the same, whether you are dealing with compound fracture or an ulcerated skin surface, as in appendicitis. If you can use your antiseptics immediately or within six hours after the wound has been made, use them. Clean out the wound, using any good antiseptic. But after that the problem becomes different altogether, and the work of Wright upon the treatment of infections has brought out a good many points that are of considerable value. He calls attention to the fact that after all the use of antiseptics under these conditions is altogether different to what it is as a prophylactic measure.

As to the question of time to operate in appendicitis, I made no recommendations on that subject. The question has not been solved, but according to a great many very excellent men they hesitate very much to operate on or about the third day in appendicitis. It is a very serious question whether it ought to be done or not. It is the danger period without doubt, but I think the danger is of autoinoculation at that stage. Your patient is in his infective phase of the first dose of toxin, and if you use vaccines you may give him an overwhelming dose—and the later manifestation is not necessarily a general peritonitis, but simply an overwhelm-

ing dose—an autoinoculation the same as if you would massage an acute streptococcic arm.

DR. CHARLES B. DANRUTHER (closing): I do not believe I have anything to say in closing, any more than to thank all the discussants for their attention to this paper.

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BLOOD CULTURES IN EPILEPSY

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During the past year the subject of infection as an etiologic factor in epilepsy has been given renewed prominence by several reports of original investigation appearing in *The Journal of the American Medical Association*. The contributions of Caro and Thom, and Wherry and Oliver report constant negative findings in the blood stream of epileptics. Reed reports constant positive findings in the blood of epileptics, and Terhune reports the isolation of a bacillus in 75 per cent. of the cases investigated by him.

Early last spring our interest was aroused by the emphatic literature of Reed concerning the ease of isolation of a specific organism from the blood of epileptics, and at that time this brief work was done. It seemed incredible that organisms could be grown, without fail, from blood of these patients by merely withdrawing one-half cubic centimeter of blood from a vein and planting it on such media as plain agar and ordinary bouillon, without the patient showing marked systemic evidence of such an extensive blood stream invasion. Previous experience having taught us that in other conditions of septicemia, with very evident systemic reactions, it is no easy matter to cultivate organisms from the blood stream, without very special technic.

The technic followed by us is a modification of the Rosenow method of obtaining blood cultures, and is the method we have used in making several hundred blood cultures, and checked in many different ways with the idea of avoiding any possible source of contamination. Eight-ounce nursing bottles were fitted with two-holed rubber stoppers and tightly fitting intake and outflow glass tubes introduced through the two holes. On the intake tube a needle was attached by a short rubber tube connection, and needle and rubber tubing jacketed by a small test tube wedged firmly by cotton packing. The tube for the suction was plugged with cotton. To each bottle was added four ounces of distilled water and one ounce of 2 per cent. sodium citrate solution. These bottles were autoclaved for one hour at fifteen pounds pressure in a five inch vacuum. Approximately one ounce of blood was drawn from the median

Shake cultures in tall tubes of ascitic dextrose agar.
Surface plants on plain and ascitic dextrose agar .
Shake cultures in tall tubes of ascitic agar.
Surface plants on plain and ascitic agar.
Ascitic dextrose bouillon.
Ascitic bouillon.
Plain bouillon.
All the culture media used were made from a veal infusion basis, and 0.2 per cent. acid.
The cultures were incubated at 37.5-38 C. and observations made daily for fourteen days.

RESULTS

A glance at the following table shows our findings to be negative with regard to any specific organism occurring with regularity in the blood of epileptics. The organisms successfully grown were of the streptococcus group,

Patient	Shake Cultures of Ascitic Dextrose Agar	Surface Plants of Plain and Ascitic Dextrose Agar	Shake Cultures of Ascitic Agar	Surface Plants on Plain and Ascitic Agar	Ascitic Dextrose Bouillon	Ascitic Bouillon	Plain Bouillon	Ascitic Fluid
B. M.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	—
C. T.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	—
F. M.	Small diplo- coccus	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	—
R. M.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	—
L. Le. S.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	—
C. M.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	—
R. S.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	—
F. G.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	—
S. K.	Strepto- coccus	Strepto- coccus	Strepto- coccus	Neg.	Strepto- coccus	Strepto- coccus	Strepto- coccus	—
Controls.....	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.

basilic vein of each patient, the area over the site of the vein having previously received a heavy coat of tincture of iodine, which had been allowed to dry. In drawing the blood the test tube was removed from the needle, and the needle introduced by puncture directly into the vein — suction on the cotton-plugged tube aspirated the blood directly into the solution previously mentioned. The containers were placed on ice for five hours; at the end of this time the hypotonic solution had completely hemolyzed the red blood cells, the citrate preventing clotting. The rubber stoppers were removed and the containers plugged with sterile cotton. Each specimen was centrifuged at high speed for twenty minutes. The supernatant fluid was pipetted off and 5 ounces of sterile distilled water added to each, the centrifuging was repeated and the supernatant fluid removed.

The sediment obtained by this procedure was taken up in sterile pipets and each specimen subjected to the following cultural conditions:

the small diplococcus dying out on second transplant. The streptococcus isolated from specimen designated S. K. grew in small discrete colonies surrounded by an area of green when subcultured on blood agar plates—evidently streptococcus viridans.
The positive findings we attach very little significance to, since epileptics as a class are very prone to focal infection, especially oral and intestinal, and in sequence organisms of this type may be expected to be occasionally found in the blood.
The following we quote from Dr. W. C. Van Nuys, head of the epileptic colonies located at New Castle, Ind., who made it possible for us to obtain the material necessary for this investigation: "In going over the list of patients from whom cultures were made, I find that the duration of epilepsy was from sixteen to twenty-nine years, with an average of a little more than twenty-two years."
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EDITORIALS

**HOW DOES PRENATAL SYPHILITIC
INFECTION OCCUR?**

This is an intensely interesting subject, perhaps not so much from the practical as from the scientific side. There is hardly any definite knowledge about it to be had. The difficulties of obtaining information are clearly obvious. But the question is such an important one that it has no doubt occurred to the mind of every thinking physician.

In those cases in which the disease is transmitted to the offspring before birth by the mother, the infection evidently occurs by the spirochetes entering the fetal circulation from the maternal circulation. In the cases in which the disease is conveyed by the father, the spirochetes are discharged suspended in the seminal fluid. Three methods of infection are then possible:

1. After the seminal fluid is deposited within the vagina some of these spirochetes may obtain a foothold somewhere in the mucosa of the vagina or cervix. Through this portal of entry the spirochetes may enter the maternal blood stream. Then they may pass the barrier of the placenta and make their way into the fetal circulation. The infection would thus be an indirect one, from the father to the mother and through her to the child.

2. It is possible that a spirochete may be carried along up to the ovum, either within or attached to a spermatozoon, and that the spirochete may enter the ovum with the sperm when the latter unites with the ovum in the process of fertilization.

3. Or it is possible that the spirochete by virtue of its own active motility may invade the ovum independently. Just as the sperm makes its way toward the ovum so may the spirochete, for they are both actively motile. It would thus be possible for the spirochete to invade the ovum either before, or at the time of, or after its fertilization by the sperm.

At present our knowledge on this point is so scant that nothing definite can be said. We know that the baby comes into the world with spirochetes in its body. In the great majority of cases the spirochetes come originally from the father, but just how they reach the child we do not know.

So far as the woman who carries a syphilitic child in her pregnant uterus is concerned, she must inevitably become infected herself. The infection may not show itself in her. She may manifest no signs or symptoms, and her Wassermann may be negative. Yet the infection is there, just as in some cases of infection with tubercle bacilli there may be no signs or symptoms indicative of such an infection.

Possibly the difference in the severity of cases of prenatal syphilitic infection may be due in part to the manner in which the offspring becomes infected. When the infection from the father comes indirectly, i. e., through the mother, the passage of the spirochete through the maternal organism may so modify its virulence that when it reaches the fetus it can cause only a relatively mild case of prenatal syphilis, whereas if the spirochete attacks the ovum directly it can produce a more virulent type of syphilitic infection. Perhaps the reverse may be the case. To be sure a great deal depends on the virulence of the strain of spirochetes transmitted by the father. At present the variations in the severity of the types of syphilis seen clinically are explained in that way, i. e., it is assumed that spirochetes of varying degrees of virulence cause infections of varying degrees of severity. In prenatal syphilitic infection, however, other factors may be equally as important. The exact manner in which the organism is conveyed from father to child may be one of these factors.

THE EXECUTIVE SECRETARY

At the Fort Wayne session of the Indiana State Medical Association a committee was appointed to employ an Executive Secretary, and to perform such other duties during the coming year as might fall within its sphere. We have, after investigating several candidates for office, secured the services of Frederick E. Schortemeier, whom we believe will prove a valuable asset to the association. Mr. Schortemeier comes to us highly recommended. He understands publicity and has had considerable experience. He has had nine years service in the newspaper field, and has staged successfully several state exhibits. He has had active ser-

vice in the political field, though never occupied a political position, and is therefore well acquainted with many influential persons. He is active in politics in this state, and is thoroughly in touch with the unordinary and extra lines of communication which it might be necessary to use to accomplish certain legislative aims and ends. Mr. Schortemeier is an attorney, a graduate of Butler College and Harvard Law School.

We desire to make it known to all members of the Association, active and prospective, that the offices of the Executive Secretary are their own headquarters, and we trust that they will make use of them. We want them to become acquainted with Mr. Schortemeier's work and we feel sure that they will find him ready and willing to do all services in all matters appertaining to medical interests of the Association. Your committee proposes to lend him every possible assistance in the matters appertaining to his work.

The work of the Executive Secretary during the next three months will concern itself chiefly with the Association's interests at the Legislature. Active work in this connection is now well under way. Another purpose of this department will be to increase the membership of the Association throughout the entire state, thus giving a stronger organization. Further, it is hoped that this department will develop into a central office which will be of assistance to the members of the Association in many other ways, both in connection with the interests of the Association and with their individual practice.

The offices of the Executive Secretary are at 308 Hume-Mansur Building, Indianapolis. In conjunction with this department a reading room is to be opened, and it is hoped that the members will avail themselves of its advantages whenever convenient.

We are anxious to serve you in every way possible.

(Signed) ALBERT E. STERNE, Chairman,
FREDERICK TUCKER,
GEO. MCCOLLUGH,
GEO. F. KEIPER,
JOHN H. OLIVER, President.

WILL TYPHUS FEVER COME TO INDIANA?

Typhus fever has appeared in Illinois and Iowa. The disease has broken out among Mexicans in railway construction camps and in slums. There is some danger that this disease may appear in Indiana. Physicians must keep a sharp

lookout and diagnose correctly. For years, typhus was confused with typhoid fever. Mild cases were frequently unrecognized. Even in New York City mild typhus was described as "Brill's disease," but later it was determined to be typhus. This disease has a sudden onset, marked nervous symptoms, and a peculiar rash. Typhus microbes are carried by lice and may spread easily and rapidly through any camp or community through this manner. Just as malaria may be prevented by destroying mosquitoes, so typhus can be prevented by destroying lice.

This miserable lice-disease killed more than 100,000 persons during the winter of 1915 in the little country of Serbia. Such an epidemic is not likely to occur in the United States, because of our cleaner manner of living and comparative freedom from vermin. If typhus fever is around in Indiana, be sure to remember that it means lice. Do not, therefore, hang asafetida around your neck, but simply keep lice off your body.—Indiana State Board of Health.

ALL-TIME HEALTH OFFICERS

The latest medical specialties are the all-time health officers and the all-time medical school inspector. The all-time industrial physician or surgeon is also a recent arrival.

Although some states, notably New York, Massachusetts and Illinois, have adopted the health district system with an all-time officer in each one, it seems to be the general opinion that the county is the proper unit. In North Carolina it is optional with the counties to employ all-time health officers, though at this time about one half of the counties of the state have taken advantage of the option and the system has proved greatly superior to the part-time service. In the "all-time counties" the health officer is always employed in the work of preventive medicine, does not compete in practice with his brother physicians and hence secures their full cooperation. He is, of course, given a living salary, is properly empowered by law, is supplied with officers like other county officers, and a substantial appropriation for public health work is supplied. The North Carolina State Board of Health reports most decided sanitary improvements in the "all-time counties." From them, very accurate vital statistics are received, nuisances are better abated, quarantines are more promptly made and better enforced, disinfections are prompt and thorough, and altogether the health service is very superior to that under the old system.

The Indiana State Board of Health introduced an all-time health officers bill into the legislature of 1911, also in 1913, and 1915, but it was defeated each time. Had it been passed in 1911 then Indiana would have led all other states in this obviously needed improvement in administration hygiene. The board again will offer its bill to the coming legislature of 1917. The board also will introduce bills making medical inspection of schoolchildren compulsory and establishing a "Division of Child and School Hygiene" under the State Board.

These are all meritorious measures and should receive the support of the medical profession. The economy of doing the public health work efficiently with trained all-time officers, instead of half way, as at present, is obvious. So plain is the need of a change in our health officer system that the wonder is why the present one was ever adopted.

The "all-time bill," as prepared by the Attorney General, provides that beginning Jan. 1, 1918, every county shall have an all-time "County Health Commissioner." These commissioners may for the first term of four years be selected by the county commissioners as at present, but after the first term they shall be selected from an eligible list supplied by the State Board of Health. Any health commissioner who has made a satisfactory record in his four years service will be entitled to admission to the eligible list, but all others must face a physical and mental examination. This plan in time will take the health department entirely out of politics, and insure men who are skilled in public hygiene. The bill provides that the salary shall in no instance be less than \$2,000 annually, and may be increased by the county council. The beginning salary of officers in the United States Public Health Service is \$1,800, and there is no lack of applicants. Those who wish to become county health commissioners must be graduates in medicine, and must pass an examination, extending over two weeks, in all branches of medicine, and must be temperate and physically fit. The belief expressed by some that qualified physicians will not seek and accept the position of county health commissioner at a salary of \$2,000 is certainly unsupported by the experience of the United States Public Health Service. In Illinois, \$1,800 is the beginning salary for all-time district health officers, and there were over twenty applicants for the five positions in the five districts into which the state is divided.

There is no doubt that the present Indiana health officers system is bad and that a better one should be adopted. And there is no doubt also that the proposed bill of the State Board of Health meets all practical requirements.

The Indiana State Medical Association and several district and county medical societies have adopted resolutions favoring all-time health officers.

It is stated that Ohio, Michigan, Kentucky, Wisconsin, Iowa, Kansas and some other states will have all-time health officers bills before their legislatures this winter. Indiana should not be behind the procession in adopting the new feature.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

EVEN the automobile—unless a man drives a Ford—has advanced in price for 1917.

THE JOURNAL extends to its readers greetings of good cheer and happiness for the Holiday Season and the New Year.

THIS number of THE JOURNAL contains the alphabetical index for the year (Vol. IX). This should be of particular value to those who bind or keep a file of their JOURNALS.

EVEN the government has been forced to curtail some of its publications on account of the high cost of paper and printing. An announcement has just been received that on this account it is necessary to cut down the mailing list of the Health News.

REMEMBER that the Association dues for 1917 remain at \$2.00. The raise in dues will be effective in 1918, or after the amendment to the Constitution proposed at the Fort Wayne session has been ratified at Evansville next September.

THERE seems to be a good deal of difference of opinion concerning the results secured from blood cultures in epilepsy. The paper by Drs. MacDonald and Edwards on "Blood Cultures in Epilepsy," published in this number of THE JOURNAL, is illuminating.

THE newspaper advertisements on "nuxated iron" say, "Consult your doctor and see what he says about 'nuxated iron.'" It wouldn't be a bad idea for the medical profession to publish a rejoinder to the effect that what most doctors say about "nuxated iron" would not look well in print.

THE *Louisville Monthly Journal of Medicine and Surgery* has changed hands, by which it becomes the official organ of the Mississippi Valley Medical Association, and will be known hereafter as the *Mississippi Valley Medical Journal*. Dr. Henry Enos Tuley of Louisville, secretary of the Association, is editor of the *Journal*.

SECRETARY COMBS advises us that some misunderstanding has arisen as a result of the announcement that the dues of the Indiana State Medical Association have been raised, and he requests us to make it quite plain that while the House of Delegates, at the Fort Wayne session, voted to increase the dues in order to meet increased expenses, the Constitution requires that final action must be postponed until the next annual session. In the meantime the dues for 1917 remain as they were before.

THIS is the month when every member of the Association should pay his medical society dues. Do not delay the matter, but do it now. Delinquency is inexcusable, and, besides, delinquency means the loss of certain privileges and advantages that go with membership in good standing in the Indiana State Medical Association. Delinquency occurs on and after February 1, but eleventh-hour payment of medical society dues does not speak well for doctors.

THE recent report of Rosenow of the Mayo Foundation, Towne of Boston, and Wheeler of New York that a polymorphous streptococcus probably gaining entrance to the body via the

tonsils is a causative factor of poliomyelitis is significant. Those who have followed the remarkable work of Rosenow for the past few years recognize in him a remarkable technician and a thorough bacteriologist. This report will receive more than passing attention and corroborative evidence will at once be sought.—*Nebraska State Medical Journal*.

SAN FRANCISCO COUNTY (California) recently has passed an ordinance prohibiting the taking of wearing apparel, household goods, etc., home on approval, and merchants are not allowed to take back into stock goods of various kinds likely to suffer by contact with the person or the household and its furnishings. This is a wise action, for, with the prevalence of syphilis, gonorrhea, skin diseases, tuberculosis, contagious diseases and even virmin, this practice is anything but conducive to the advancement of public health, and other counties and states would do well to pass a similar law.

THE daily papers report that the Chiropractors' Association of Indiana has raised a fund of \$2,000 to pay the expenses incident to the presentation, at the next session of the Indiana Legislature, of a bill creating a separate board of examiners for the chiropractors. It is reported that the chiropractors intend to have their profession recognized as distinct from the medical profession. They admit that it is difficult for them to practice under present laws, and for the reason that they possess none of the requirements contemplated by the laws in licensing persons to care for the sick and afflicted.

THE November number of the *Journal of the Michigan State Medical Society* gives a report of an innovation inaugurated by the Jackson County (Michigan) Medical Society which is worthy of duplication. This society secured the presence of Dr. Cabot of Boston for a week. Dr. Cabot conducted a clinic each morning of that week at one of the local hospitals, and each evening he delivered a lecture to the members of the society. Many cases were presented, their etiologic, pathologic and diagnostic features were discussed and their treatment outlined. Aside from the practical knowledge gained through a week's course of study of this sort, there naturally would follow an increased spirit of interest in scientific and modern medicine, which would mean a continuance of such postgraduate work, and postgraduate work can only mean a better and more efficient medical profession.

At the time of going to press we have received a letter from a prominent surgical instrument manufacturer saying that all prices have been advanced from 25 to 100 per cent., and that aside from the fact that no quotations will stand for longer than a few days, physicians must expect that in many instances their orders cannot be filled at all. The price of drugs—as every one knows,—is almost prohibitive, and in fact scarcely anything has escaped the raise in prices. It even costs a man more to die and have a decent burial, for the undertakers have raised the price of coffins. Yet the doctor works along at the same old rate!

THE American Society for the Control of Cancer advocates yearly medical examination for the prevention of disease, and strongly urges the selection of a national medical examination day. The argument is advanced that the time is coming when Americans will appreciate the great wisdom of the Chinese policy of paying the doctor to keep the patient well. The rapidly growing movement in favor of an annual medical examination for every person, sick or well, promises much benefit in the reduction of the death rate from cancer as well as that from tuberculosis. In both these very prevalent diseases the hope of cure is very much greater if the ailment is recognized and treated in its early stages.

ALONG with the high cost of publishing newspapers and periodicals is to come an increase in the second class postal rates, if the chairman of the Postal Committee of Congress is to have his way. It is claimed that the second class postal rate causes a great loss to the government, and that the plea that the government should stand the loss because dissemination of printed matter is a means of educating the masses should not prevail. At all events, we look for increased postal rates on all printed matter, but it is not at all unlikely that letter postage will be reduced. THE JOURNAL is not in a very good condition to stand any increase in the postal rates, but, in company with all other periodicals, will be obliged to take the medicine whether it is palatable or not.

IN the death of Philip Mills Jones, a Trustee of the American Medical Association, and editor of the *California State Journal of Medicine*, the medical profession has lost one of its most effective workers in everything that pertains to medical progress. He was uncompromising in his stand for higher ideals and fearless in his attacks on fraud of every description,

whether it concerned quackery or related to some phase of medical practice. Socially, he was a charming fellow to know, and he not only secured and held the friendship of medical men all over the state of California, but all over the United States as well. The death of Dr. Jones is, therefore, a loss to the medical profession as a whole, and medical editors in particular note his death with a feeling of personal loss.

THE great European war still rages, and lay journals as well as medical journals recount the achievements of medical men in the great war hospitals. There is even a demand for more medical men, and especially medical men capable of doing surgery. We wonder if the average person has noted that among all the reports concerning medical and surgical work in connection with the European war, not a one concerns work done by Christian Scientists, osteopaths, chiropractors, neuropaths, vitapaths and the horde of other "paths" that may be listed in the army of pretenders. The reason is obvious. In times of great disaster, such as accompanies war and epidemics of communicable diseases, there is a demand for real doctors, and not for those of the make-believe kind. What a pity it is that some of our legislators do not appreciate the significance of this fact. The loudest supporters of the various pseudomedical cults are the first ones to turn to the regular medical profession in time of real trouble.

THE Vanderburgh County Medical Society has passed unanimously the following resolutions:

Owing to the fact that an employee, hurt or injured while working in factories or while engaged in other employment that comes under the jurisdiction of the Workmen's Compensation Act as passed by the Indiana Legislature, is compelled to accept the services of any physician or surgeon designated by his employer or lose the services and compensation intended for him under the Workmen's Compensation Act; and believing that this is unjust and unfair to the employee, therefore be it

Resolved, That the Vanderburgh County Medical Society go on record as favoring an amendment to the Workmen's Compensation Act which will permit the employee to have the privilege of selecting his own surgeon or medical attendant, and whenever he is unable to do this, then the employer may call a surgeon to care for him. Be it further

Resolved, That this society petition the Committee on Legislation of the Indiana State Medical Association to frame such an amendment to the Workmen's Compensation Act and have it presented to the next Indiana Legislature for adoption. Be it further

Resolved, That a copy of these resolutions be sent to THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION for publication, and that a copy be furnished the Committee on Legislation.

THERE is one clause in most accident or health insurance policies which in not a few instances works a great detriment to the insured, and it is the clause that requires confinement to the house in order to secure total disability indemnity. As an instance, a man engaged in almost any occupation may receive a serious eye injury, or may suffer from a very severe attack of iritis, and be totally incapacitated for any and all work, yet able to walk or ride to a physician's office for attendance. If he remains at home, and the doctor visits him there, he can secure indemnity on the basis of total disability, but if he visits the doctor's office, even though unable to do any work, he is considered but partially disabled. It is a technical point overlooked by the purchaser of an accident or health policy, but one enforced by the insurance company in case of claim for indemnity. It is an imposition practiced by the majority of accident and health insurance companies, and in the interest of fair play medical men should make an effort to have the condition changed, or warn the policy holder as to what he is up against. We do not believe the courts would sustain the health and accident companies in such an unfair advantage as is generally taken of the policy holder when the clause under consideration is enforced.

A PROMINENT lawyer told the editor of THE JOURNAL that the members of the regular medical profession should present a more united front in an endeavor to stamp out quackery (which we admit), but he had very little to say when confronted with evidence pointing to the fact that the legal profession should take a little of the advice so freely offered to others, for if any profession requires an uplift and a higher standard of requirements it is the legal profession. There are any number of shyster lawyers in any populous community, and, so far as we know, no effort has been put forth in the last half century to raise the requirements for the practice of law. True it is that there are many attorneys who through personal incentive have acquired academic and legal degrees, but the man with a common-school education and a few weeks or months of indifferent study in a lawyer's office, applies for admission to the bar, and the shame of it is that seldom, if ever, is such an incompetent refused admission. It is this class of poorly equipped lawyers who form the great body of politicians who materially aid in the passage of bad laws, and who are a stumbling block in the way of progress for the medical profession in elevating standards for practice. In the light of existing

conditions it ill becomes members of the legal fraternity to advise members of the regular medical profession to get together and raise the standard of the practice of medicine. It is time for the lawyers to get together and raise the standard for the practice of law.

THE General Education Board, in cooperation with the Rockefeller Foundation, has appropriated \$2,000,000 to the University of Chicago for the establishment of a Medical Department. It is understood that the university will set aside at least an equal sum for the same purpose, will give a site valued at \$500,000 on the Midway, and will raise an additional sum of \$3,300,000. Besides this, the university will take over the Presbyterian Hospital and all equipment, valued at \$3,000,000. This makes a total endowment of \$11,000,000 to start with, and the amount probably will reach \$15,000,000 before its completion. This means a wonderful advance in the way of medical education in this country. Before the European war hundreds of medical men went annually to Vienna and Berlin for the purpose of pursuing their studies under more favorable conditions, and one reason for the advantage was the fact that the faculty and teaching staff in the universities there devoted their whole time to instructing. The Medical Department of Chicago University will furnish such a medical center as Vienna or Berlin, and its clinical teachers and laboratory workers will be full-time men. Aside from this, all the most recent developments in the line of medical education will be incorporated in the plan of the new organization. All students must possess academic degrees before being admitted to the college, and unusual facilities for post-graduate work will be offered. This is but another evidence that Chicago is not only going to be a populous center of this country, but it eventually will be the medical center of America. This new institution, along with the American College of Surgeons and the home of the American Medical Association, goes a long way toward carrying out this prediction.

SURGICAL instruments, drugs, and in fact every kind of medical and surgical equipment has advanced in price in order to keep pace with the advance in price of other things. Even the poor chap who wears an artificial eye or an artificial leg is penalized by almost double expense over and above what the same expense was before the beginning of the European war. This is not due altogether to an increased demand, but rather to conditions which permit an increase

in the price because the public will stand for it. Surgical instruments, always extravagantly high in price, are now costing more as a result of the increased cost of both labor and material, but the average dealer in physicians' supplies is not content to make a reasonable profit. As an example, if the most ordinary appliance, which may be purchased from a department store or dealer not classed as handling physicians' supplies, is purchased from a surgical instrument house the price is from 25 to 50 per cent. greater. The Editor of *THE JOURNAL* looked at some brass floor lamps for use in treatment or operating rooms, and a surgical instrument house quoted \$9.50 as the price. On the same day, and in the same city, a department store furnished the same lamp, except that it was of better quality, for \$6. Such instances are not uncommon, and indicate the general tendency to put the price up to the highest point tolerated by the buyer. There is, however, a redeeming feature, and that is in the conduct of the larger and more responsible firms. As a rule, they are not attempting to take advantage of customers, and are more apt to sell at a price that is consistent with a fair profit, whereas the small dealer—and especially the irresponsible and tricky one—takes advantage of the unsettled condition of the market, and, sizing up the customer, puts the price at the highest notch obtainable. Therefore, in these times of unsettled prices and questionable quality of material, it pays to deal with firms of established reputation for quality of goods furnished and fair dealing as to prices.

At the meeting of the American College of Surgeons, held in Philadelphia on Oct. 27, 1916, Dr. John G. Bowman, director of the college, made the following statement concerning the attitude of the college on the division of fees:

Now a word about fee-splitting. This is a subject which I should like to avoid. It is a disgrace that there is need even to mention it. But there is need. Any one who divides fees is a liar and a thief. If milder terms would fit the case, I would use them. They will not fit. This evil is the basis of unnecessary operating and of incompetent operating. The College has plans now to fight it beyond anything yet attempted. But we cannot go into that subject now.

The Board of Regents has just held a meeting. It has just considered the names of seven Fellows of the College about whom there is some evidence of the practice of division of fees. After full consideration, the Board dropped three Fellows from our list. Two of these are suspended pending further information. The Board voted, further, to make public the names of men expelled from Fellowship. (The name of a Fellow was read who was expelled for "reasons derogatory to the dignity of the College and inconsistent with its purposes.")

The work of the past year has developed a most important fact in this connection. A surgeon cannot engage in the division of fees and cover up the practice. The Regents do not propose, either, that the practice shall be covered up. They mean business, and propose to expel any Fellow from our group, however prominent he may be, whenever the facts justify such action.

Let the good work go on, and may the college live up to its promises. In intent, the American College of Surgeons is worthy of the greatest respect, but the action of the future will be the basis on which the standing of the college will be established. Like all enterprises, the college has made some grievous mistakes that are not easily rectified, or, for that matter, subject to correction, but there is some consolation in the fact that the leaders in the college now realize the necessity of living up to high ideals, and we therefore wish the enterprise success. The matter of expelling fee dividers is only one means by which the organization can be made stronger. It is a pity that it cannot be made stronger by dropping some of the incompetents who gained membership in the organization through an inexcusable laxity in enforcing rules and regulations that, if rigidly upheld, would have given the college a membership of only men who are entitled to belong to such an organization, and by so doing the college would now have a still better standing than it possesses. The raising of the dues of the college to \$25 per year from each member means that the income from dues and from the million dollars that has been prescribed as an endowment fund will furnish ample means with which to carry out the plans that have been proposed for the advancement of every branch of surgery. The selection of Chicago as the home of the college, where, in all probability, a suitable building will be erected, should meet with the approval of every one, for not only is Chicago centrally located, but it is destined to become eventually more of a medical center than any of the eastern cities. If the officers and board of regents secure the cooperation of the members of the college, it is quite possible that big things will be accomplished. Time will tell whether any confidence has been misplaced.

THE present session of Congress will have its hands full in dealing with labor problems. The so-called eight-hour law does not promise to bring the desired returns for some of those who stood sponsor for it, for, while it helps one class of employees, it does not help all, and of course everyone wants a "finger in the pie."

It is commonly reported that labor agitators are in Washington now preparing to fight any efforts to secure legislation providing for arbitration on labor disputes. With some of the labor leaders it does not seem to be a question of justice or fairness, but rather a question of securing demands, whether the demands are right or wrong. To the labor leader, might makes right, and if some of the present agitation bears fruit it will not be long before any sort of imposition will have to be tolerated, whether there is any semblance of justice in it or not. The conditions would not be quite so appalling if there was a tendency to give an adequate return for exactions that are made compulsory. The trouble with the labor proposition is that there is a growing sentiment among a very large class of employees to give just as little in return as possible for the wages or salary paid. The poor or indifferent workman is upheld by his union, and the same is true of the man who loafs on the job. The average employer of labor does not object so much to the hours of labor as he does to the tendency of some of his employees to give poor service. If all the unions would insist upon a certain standard of service being given employers, and cease to uphold the member who does not come up to that standard, there would be less chance for labor disputes than at present.

The conditions existing today whereby labor can and does secure its demands bear testimony to the efficiency of organization. It is possible for the labor organization to secure almost any kind of legislation, and it is because the labor organizations put up a united front. We are not advocating union methods for the medical profession, but we do believe that medical men would secure fairer treatment if they followed the example of the labor organizations in putting up a united front in attempts to secure legislation that is in the interest of the public as well as the medical profession, and in preventing vicious legislation. The average medical man is too little interested in anything outside of his own office. He puts on his cloak of professionalism and keeps it on, irrespective of what happens. He depends upon others to work out the salvation of the medical profession as a whole, and, while he is doing this, conditions that are detrimental to his best interests are being created without an effort on his part to prevent them. True it is that some men are working hard for the general good, and much has been accomplished through the efforts of such men, but still more can and should be accomplished if every doctor would pay some

attention to those questions which pertain to the common good. In other words, medical men must put up a united front, just the same as men belonging to labor organizations, and this is absolutely necessary if we are to accomplish all that is worth while. The Lord helps those who help themselves, and the medical profession can expect nothing from the outside. We need legislation that will further educational standards, and we need legislation that will protect the public from the deception and frauds of quackery. We also need legislation that not only will raise the standard of medical practice, but protect the medical man in his professional work. A united front means much in accomplishing results—apathy and indifference means failure.

DEATHS

JAMES FAUBION, M.D., of Heltonville, died November 20, aged 84 years.

JAMES P. ENGLISH, M.D., of Terre Haute, died November 27, aged 62 years.

JOHN THOMPSON RICE, M.D., died November 18 at his home in Attica, at the age of 83 years. He had practiced medicine in that community for many years, and had been located at Attica since 1867.

DAVID C. KNOTT, M.D., Plymouth, died very suddenly November 8 from heart failure. He was 58 years of age, began the practice of medicine in 1882 at Burr Oak, removing to Argos seven years later, and in 1893 located at Plymouth. He was active in politics, church, public welfare, and the organizations of his profession, being a member of the Indiana State Medical Association and the American Medical Association.

ISAAC N. CORCHRANE, M.D., Delphi, died November 22 at the Eastman Hospital, Indianapolis, aged 73 years. Dr. Corchrane was born in Ireland in 1843, came to this country in 1848, residing at Wacousta, Mich. He graduated in medicine from the University of Michigan and located in Carroll County in 1876, where he continued to practice medicine until his death. He served four years as mayor of Delphi, and at the time of his death was coroner-elect of Carroll County. He was one of the leading medical men of his community, and was a member of the Indiana State Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

GENERAL

PORTLAND has been having an epidemic of smallpox.

DR. N. J. SHOOK, formerly of Kendalville, has located at Grabill.

DR. AND MRS. O. G. PFAFF of Indianapolis have returned from a trip to New York.

THE public health benefit "tag day," observed at Kendalville, netted \$220 for the cause.

DR. N. C. HAMILTON of Kokomo has been attending clinics at Mayos', Rochester, Minn.

DR. U. H. MERSON of Anderson has been quite ill at St. John's Hospital, Anderson.

THE home of Dr. C. H. Tomlinson at Cicero, Ind., was destroyed by fire early in November.

MERCY HOSPITAL, Gary, gave a banquet on November 11 to the leading physicians of that city.

THE new Columbus hospital is nearing completion, and probably will be opened the first of the year.

DR. FRANK C. ROBINSON of Martinsville has been promoted to the rank of major on the army medical service.

DR. EARL BAILEY RINKER of Indianapolis was married November 11 to Miss Lyla F. Jones of Greenfield.

DR. A. H. SHAFFER, 86 years old, was reelected treasurer of Huntington County at the recent election.

DR. T. F. WOOD of Angola suffered a stroke of paralysis some time ago, but is again able to attend to his practice.

DR. ELI SHERMAN JONES of Hammond was married on November 18 to Miss Berta Dyer Herold of Bloomfield.

DR. U. G. VANCE, formerly of LaFontain, Ind., has removed to Waterloo, where he will engage in the practice of medicine.

DR. AMZI WEAVER of Elizabeth has been quite seriously ill and underwent a surgical operation at the Louisville hospital.

DR. J. B. FATTIC of Anderson recently underwent a surgical operation at St. John's Hospital, and is making a satisfactory recovery.

DR. ARTHUR N. CALVERT of Indianapolis has been appointed assistant resident physician at the Tuberculosis Hospital, Cincinnati.

DR. C. W. MACKEY of Portland has returned from a hunting trip in Quebec. Just before starting home he received quite a painful injury from a fall.

DR. S. R. WHITE and wife of Laud, together with a party of friends, left the latter part of November for Smyrna, Fla., where they will spend the winter.

DRS. J. B. MAPLE and J. T. Wrook of Shelburn have purchased the practice of Dr. A. J. Nellans, also of Shelburn. Dr. Nellans is removing to Cincinnati.

DR. W. M. SIDERS, formerly of Millersburg, but who has been spending some time in New York City taking special work, has returned to Warsaw to engage in practice.

DR. W. R. CRAVENS of Bloomfield has been appointed local examining surgeon for the Bureau of Pensions, to fill the place made vacant by the death of Dr. B. A. Rose.

DR. E. RAY ROYER, who recently moved from North Salem, locating in Indianapolis, has purchased the practice of Dr. Mozingo at North Salem and returned to that place.

DR. E. B. MOSER of Windfall, whose license was revoked some time ago, was reinstated by the state board of medical registration and examination at their November meeting.

DR. ANTHONY J. BENNEWITZ, who has served as intern at St. Elizabeth Hospital, Lafayette, for the past two years, resigned recently and has located at Cicero, Ill., to engage in practice.

BLUFFTON has reported more than fifty cases of typhoid fever this fall. It is believed that the disease was spread either by a carrier during the street fair, or by insanitary drinking fountains.

DR. WILLIAM GILMAN THOMPSON has resigned as professor of medicine at Cornell University Medical College. He is to be succeeded by Dr. Lewis A. Conner, professor of clinical medicine.

THE new \$125,000 Van Wert County Hospital, Van Wert, Ohio, was dedicated on November 28 with fitting ceremony. Drs. J. W. Christie, H. A. Duemling, Fort Wayne, and E. O. Smith, Cincinnati, were the principal speakers.

PHYSICIANS of Westport, Zenas and Letts met on November 21 and organized the Bi-County Medical Society. Dr. O. F. Welch of Westport was elected president, and Dr. Charles Wood, Westport, secretary-treasurer. The next meeting will be held January 17.

SIX surgeons, one dentist and twenty nurses, composing another detachment of the Harvard Medical School Unit, sailed from New York on November 20 to Liverpool. The group will take the place of the doctors and nurses now on duty at the British base hospital in France.

THE first scientific session of the American Congress on Internal Medicine will be held in New York City, December 28 and 29, 1916, following the meeting of the American Association for the Advancement of Science. A very interesting provisional program has been issued.

DR. ARTHUR E. GUEDEL of Indianapolis has resigned the superintendency of the Protestant Deaconess Hospital of Indianapolis, and, after some months of preparation in New York, will return to Indianapolis and devote his attention to genito-urinary practice.

THE New York Medical College and Hospital for Women is to have a new medical library, endowed by Mr. M. W. Dominick as a memorial to his son, Dr. George Carlton Dominick, who died at sea recently. Dr. Dominick was an instructor at the college for a number of years.

THE November meeting of the Whitley County Medical Society was held at Columbia City, November 14. Dr. C. W. Hanford, Managing Director of the Physicians' Radium Association of Chicago, gave a talk on "Radium," and Drs. Tennant and Metzger delegates to the state meeting gave reports.

DR. MILES F. PORTER of Fort Wayne was elected president of the Northern Tri-State Medical Association at their recent meeting. E. L. Eggleston of Battle Creek was elected first vice-president; H. F. Mitchell of South Bend, treasurer, and G. W. Spohn of Elkhart (reelected) secretary.

THIRTEENTH DISTRICT MEDICAL SOCIETY met in regular session at Elkhart on November 14, with the following program: Morning clinic, 10 o'clock to 12, at Century Club; scientific papers 1:30 p. m.: "Tonsils and Teeth in Relation to Systemic Conditions," G. W. Spohn, Elkhart; "Conservation of Nervous Energy," F. F. Hutchins, Indianapolis.

THE Tenth District Medical Association met at the Hammond Country Club, November 22, with the following program: "A Few Interesting Case Histories," Simon J. Young, Valparaiso; "Syphilis of the Aorta," Robert B. Preble, Chicago; "A Study in Psychanalysis," Sylvan E. Sommer, Chicago; "Infant Mortality," Otis B. Nesbit, Gary.

DR. F. G. THORNTON of Knightsville, historian of the Clay County Medical Society, has written and compiled a Centennial Medical History of Clay County, Ind., from 1825 to 1916, and of the Clay County Medical Society. The history is gotten out in neat, attractive pamphlet form, and is a splendid contribution to the State Medical Centennial History of Indiana.

THE OHIO VALLEY MEDICAL ASSOCIATION convened at Evansville, November 23 in its eighteenth annual convention. Officers for the following year are: president, Dr. William Shimer, Indianapolis; first vice president, Dr. J. Rawson Pennington, Chicago; second vice president, Dr. W. F. Boggers, Louisville; third vice president, Dr. M. L. Heidingsfeld, Cincinnati; secretary-treasurer, Dr. B. L. W. Floyd, Evansville.

ANNOUNCEMENT is made that Mr. Louis R. Curtis, for eighteen years superintendent and secretary of St. Luke's Hospital, Chicago, has been elected the president and head of the Frank S. Betz Company, Hammond. Mr. Frank S. Betz, under whom the concern bearing his name has grown to its present proportions, will continue with the company as chairman of the board of directors.

THE United States Census Bureau estimates that on Jan. 1, 1917, the population of the country and its possessions will have reached 113,309,285, as against 111,579,952 in 1916. The population of the continental United States at that time is estimated at 102,826,309. The state of New York leads with an estimated population of 10,366,778; Pennsylvania is given 8,591,029; Illinois, 6,193,626; Ohio, 5,181,220; Texas, 4,472,494, and Massachusetts, 3,747,564. —*Medical Record*, Dec. 2, 1916.

PHILIP MILLS JONES, M.D., died in San Francisco, November 27, from pneumonia. Dr. Jones was a member of the Board of Trustees of the American Medical Association, secretary of the Medical Society of the State of California, editor of the *California State Journal of Medicine*, member of the National Committee of One Hundred on Public Health, and a fellow of the American Academy of Medicine. He was a brilliant writer, forceful speaker, and an untiring and energetic worker in all public health propaganda.

MARTIN I. WILBERT, one of the best informed pharmacists in the United States, valued member of the Council on Pharmacy and Chemistry of the A. M. A., secretary of the Section on Pharmacology and Therapeutics of the A. M. A., member of the revision committee of the United States Pharmacopeia, etc., etc., died in the German Hospital, Philadelphia, November 25. The passage of the antinarcotic law, which has done so much to curtail the drug habit in this country, was largely due to his untiring efforts; and his death is an irreparable loss to American pharmacy.

THE Kentucky Medical Association elected the following officers for the ensuing year: president, Dr. P. H. Stewart of Paducah; first vice president, Dr. L. P. Earle, Charleston; second vice president, Dr. A. S. Brady, Greenup; third vice president, Dr. J. G. Gaither, Hopkinsville; councilors, Dr. J. W. Kinkead, Catlettsburg; Dr. J. N. McCormack, Bowling Green; Dr. R. C. McChord, Lebanon; orator in medicine, Dr. Sidney J. Meyers, Louisville; orator in surgery, Dr. Fred L. Koontz, Louisville. The 1917 meeting will be held in Ashland.

THE thirty-first special annual meeting of the the St. Joseph County Medical Society was held at South Bend, November 17. Dr. J. B. Berteling of South Bend presented a paper on

"Cesarean Section"; Dr. Frank Smithies of Chicago on "Intestinal Stasis and Its Clinical Management"; Dr. Fred Zapffe of Chicago on "Bone Tumors," and Dr. Hugh T. Patrick of Chicago on "Some Ordinary Headaches." The feature of the evening session was the address of, Dr. Fred Albee of New York on "War Surgery in France," illustrated with moving pictures.

THE first examination conducted by the National Board of Medical Examiners was held October 16 to 21 at Washington, D. C. There were thirty-two applicants from seventeen states, representing twenty-four medical schools, and of these sixteen were accepted as having the necessary preliminary and medical qualifications, ten of whom took the examination. Out of the ten men, five passed the examination. They were as follows: Dr. Harry Bidney Newcomer, Johns Hopkins University; Dr. William White Southard, Johns Hopkins University; Dr. Orlow Chapin Snyder, University of Michigan; Dr. Thomas Arthur Johnson, Rush Medical College, and Dr. Hjorleifur T. Kristjanson, Rush Medical College. The second examination will be held in Washington, D. C., June, 1917. Further information may be obtained from Dr. J. S. Rodman, secretary, 2106 Walnut Street, Philadelphia.

THE Association for the Study of the Internal Secretions recently was organized by a group of physicians who met in Detroit for the purpose. The aim of the organization is implied in the name. The charter membership includes nearly three hundred prominent physicians from every part of the United States; and the organizing committee, to care for the preliminary work of establishing the association on a firm and useful basis, is composed of the following men: Dr. Lewellys F. Barker, Baltimore; Dr. Judson Daland, Philadelphia; Dr. L. R. DeBuys, New Orleans; Dr. Emil Goetsch, Baltimore; Dr. George H. Hoxie, Kansas City; Dr. John B. Potts, Omaha, and Dr. Henry R. Harrower, Glendale, Los Angeles, California, who is secretary. Announcements of this new association indicate that libraries are to be established and a scientific bulletin published to contain a résumé of all the work that is being done in this ever broadening and highly profitable study.

THE University of Chicago is to have a new medical department of its own, having heretofore been connected with the Rush Medical Col-

lege. The General Education Board and the Rockefeller Foundation have announced the appropriation of \$2,000,000 for the establishment of this department, and it is understood that the university will set aside at least an equal sum for the same purpose, will give a site on the Midway, valued at \$500,000, and will raise a further sum of \$3,300,000. In addition to this the present plant and equipment of the Presbyterian College, Chicago, valued at \$3,000,000, will be placed under the control of the medical department of the university. The department will be organized along the most recent developments in medical education, and the faculty and teaching force will include only full-time men. The new school will accommodate 300 students, all of whom must possess academic degrees before entering, and will also have facilities for postgraduate work.

SOCIETY PROCEEDINGS

TENTH COUNCILOR DISTRICT

Tenth District Medical Society met at Hammond Country Club, November 22, at 1:30 p. m. The following program was given: "A Few Case Reports," Simon J. Young, Valparaiso; "A Study in Psycho-Analysis," Sylvan W. Sommer, Chicago; "Syphilis of the Aorta," Robert W. Preble, Chicago.

The Hammond physicians tendered the visiting members a dinner at 6 p. m., following which John H. Oliver, president of the Indiana State Medical Association, talked on the new business plan adopted by the State association.

Six reels of French war hospital pictures were shown during the evening, featuring the work of Drs. Fred Albee and Alexis Covell, both of New York.

On motion the society adjourned to meet in LaPorte in May, 1917.

E. M. SHANKLIN, Secretary.

INDIANAPOLIS MEDICAL SOCIETY

Meeting of October 3

The first meeting of the year was called to order by Dr. A. B. Graham, president. Minutes of previous meeting were read and approved. Applications of Drs. R. M. Moore and Joseph Kent Worthington were read for the first time and ordered posted for thirty days.

The secretary read a letter from the Indiana Conference on Mental Defectives asking the appointment of delegates by the Indianapolis Medical Society. A letter from F. W. Peabody of Boston was read asking for a hearing for his Christian Science Lecture. No action was taken. A letter from the Committee of the American Medical Association on Red Cross Med-

ical Work was read asking for the appointment of a central committee of five men to cooperate with the organization. A motion was passed authorizing the president to select the members of the committee.

PROGRAM

Paper, "The Value of Ocular Signs in the Diagnosis of General Conditions," illustrated with original drawings and charts, Dr. J. R. Newcomb.

Abstract.—A résumé of the more common ocular symptoms which are available to the general practitioner and which offer him a great aid in the early diagnosis of many conditions, among which were mentioned arteriosclerosis, nephritis, tabes and organic diseases of the central nervous system. The use of the ophthalmoscope as an aid in general diagnosis, the observation of the pupils and their various reactions and the value of the campimeter were discussed.

Paper, "Appendicitis, a Surgical Disease," Dr. Goethe Link.

ABSTRACT OF DISCUSSION

DR. J. A. MACDONALD: I should be transgressing if I were to undertake any technical discussion of the eye findings in general systemic disease when in the presence of men who devote their entire time and skill to the careful differentiation and interpretation of the pathologic changes which may be discovered by examination of the eye, but I wish to speak from the standpoint of the physician dealing today with all the phases of internal medicine, who, unless he can avail himself of every possible means for obtaining accurate information bearing on the interpretation of very limited subjective symptoms, finds himself being pushed backward baffled and impotent and turning eagerly for help. From examination of the eye he can expect to obtain help only in relation to diagnosis and prognosis. With continued practice one may, without devoting himself to the subject exclusively, acquire sufficient skill to enable him to interpret many of the commoner ocular findings. The use of the ophthalmoscope, to which I refer in the main, should be practiced by a man who is careful in his diagnosis for the time required is not very great. The electric ophthalmoscope, which has been steadily perfected over the last few years, makes examination comparatively easy and removes many of the former difficulties. While it is not advisable to attempt careful examination without a mydriatic, yet in case of great need one can get around the pupillary margin very well with the electric ophthalmoscope. This procedure is most helpful in such cases as the hitherto unsuspected or unrecognizable brain lues, the collapse of the unrecognized diabetic, nephritic, or in the case of retrobulbar infection and sinus thrombosis. I refer more particularly to the hemorrhagic disease; the blood stream infections characterized by hemorrhage; blood stream infections of the low grade streptococcus type in which petechiae of the conjunctiva are so frequently found as to be nearly pathognomonic. These are very small and usually apparent at the point of reduplication of the conjunctival sac. They are often found to be present when careful search of the skin fails to reveal any other ecchymosis.

In a group of cases which is always difficult of interpretation the patient presents a picture which at first is very confusing. This is usually in women

past middle age, with difficulties directly attributable to faulty intestinal activities and much disturbance of the gastric digestion which is especially emphasized by the patient herself. We find steadily increasing atony of the skeletal muscles with the accompanying weakness, disturbance of respiration, headache, easy mental excitement, partly and only moderate elevation of the systolic blood pressure and very slight or only occasional urinary renal findings. These are usually cases of the type of cardiovascular-renal disease and all have the glistening eye of premature old age. This appearance is produced by a very moderate conjunctival edema which on very slight provocation becomes well marked chemosis and in these cases the frequent retinoscopic examination will sooner or later reveal some retinal hemorrhage, which is of importance in prognosis. But little secondary to that of the gross albuminuric retinitis are the anemias of middle and late life. It has been my experience that retinal hemorrhage is of very much greater frequency in the pernicious type than in the secondary anemias of however severe degree. Not to occupy too much time in further enumeration of conditions which at best are little more than isolated instances of the broader outline which Dr. Newcomb has given, I wish to emphasize the fact that by the careful and frequent use of the ophthalmoscope we may all at least attain a degree of proficiency which will enable us to say that something is wrong in the eye which we are examining and which will give us special reason to send this patient to the men who are especially trained for the interpretation of the very early manifestations of disease.

The day has long since passed when we best served our patients by an ability to detect an advanced retinitis or well-established choked disk or optic atrophy. It is only by the interpretation of the early period of arteriosclerosis and various findings of retinitis that we can assure ourselves that we are treating diseases which will inevitably in time become incurable. The routine of efficient examination of the pupil, the ocular tension, the extrinsic muscles, the palpebral fissure for the determination of exophthalmos and the observation of the conjunctiva for edema takes so little time when used systematically, that it is inexcusable to omit it.

DR. C. F. NEU: The essayist has called attention to things that we can all use daily. Pupillary conditions are important in the diagnosis of nervous diseases. The eye examination often shows the first physical evidence of syphilitic brain disease. The condition of the external and intrinsic muscles of the eye often gives an intimation of trouble. It is difficult to interpret ophthalmoscopic findings. Changes in the brain are reflected in the retina, the latter being an outgrowth of brain tissue. Arteriosclerotic changes frequently are to be found primarily in the retina.

DR. DAVID ROSS: Appendicitis should be classed as emergency surgery. It was formerly thought that appendicitis ought not to be operated in the first attack. We now know better. So-called catarrhal appendicitis does not exist. The condition is purulent from the beginning. The appendix is a non-functionating body with a very small amount of resistance, therefore the progress of the disease is rapid and consequently fatal. Successive attacks only serve to lessen the already low resistance of the appendiceal tissue.

DR. T. B. EASTMAN: It seems almost unnecessary to reiterate that appendicitis is a surgical disease. Much in literature concerning time of operation. Some advocate allowing case to wait five or six days if not gotten early. In using a cigaret drain, one is using gauze—gauze does not drain. Use large rubber tubes for drainage. The use of ether in the wound, immediately before closing the abdomen, has apparently been of advantage.

DR. A. E. STERNE spoke about the great value of eye examinations in determining brain conditions, dwelling particularly on the fact that the general practitioner calls the specialist in the later stages when the finer localizing possibilities have been obscured.

DR. A. C. KIMBERLIN: Dr. Newcomb's paper is of great practical value to the general man because it is elementary. We often try to see too much in eye examinations. We ought to confine our attention to one thing. The examination of the eye has a very wide range and is very delicate.

DR. F. W. FOXWORTHY: The place for operating is very important. Our experience with troops on the Mexican border showed this conclusively. Those cases of appendicitis operated in small rooms without hospital surroundings did not progress as well as those sent a long distance on the train and operated in a hospital.

DR. J. R. NEWCOMB (in conclusion): If a general practitioner examines an eye and is able to determine an abnormality, he is 50 per cent. better than the man who does not examine at all. The average physician has an oculo-phobia. Early recognition of eye condition is necessary because neoplasms grow very rapidly and the condition gets worse in a short time. An observation of the pupil and the retina gives a command of early diagnosis.

Meeting adjourned. Attendance 84.

No meeting on October 10 on account of Mississippi Valley Medical Association meeting.

Meeting of October 17

In the absence of the president, Dr. A. B. Graham, Dr. Erdman presided. Minutes of previous meeting were read and approved. Applications of Drs. M. F. Dean, Ernest V. Smith, and Harry H. Heinrichs were read for second time. The secretary of the Judicial Council reported that Dr. J. D. Moschelle had been asked to submit any new evidence in writing to the council. It was moved and seconded that a letter of thanks and appreciation be sent Eli Lilly and Company for their contribution to the entertainment fund for the Mississippi Valley Medical Association.

PROGRAM

Case Report. Two Cases of Kidney Stone, Dr. P. E. McCown.

Case Report. Mastoid Sequestrum Following Scarlet Fever, Dr. P. B. Coble.

Case Report. Observations and Comments on Cases of Infantile Paralysis, Dr. W. D. Hoskins.

Discussion of the interesting cases was invited and was opened by Dr. A. E. Sterne, followed by Dr. E. E. Padgett, who reported an unusual case of kidney stone

with total destruction of the kidney. Further discussion followed by Drs. L. H. Segar, C. D. Humes, C. F. Neu, G. B. Jackson, E. B. Mumford, F. C. Potter, W. S. Tomlin, H. G. Hamer and Bernhard Erdman.

Meeting adjourned. Attendance 71.

L. H. MAXWELL, Secretary.

Meeting of October 24

Meeting was called to order by the president, Dr. A. B. Graham. In the absence of the secretary, Dr. A. L. Marshall was appointed acting secretary. There being no business or committee reports the society proceeded to the program of the evening.

PROGRAM

Paper, "Cancer of the Larynx, with a Report of Cases," Dr. Lafayette Page.

Abstract.—Cancer of the larynx is a comparatively rare affection. During the last twenty years of the author's practice twenty cases of unmistakable intrinsic cancer of the larynx have consulted him. Of these twenty cases, five were seen and operated on during the incipient stage of the disease, with one death twelve hours after the operation and four complete recoveries—all alive and in average good health from three to eight years after removal.

The operation of thyrotomy or laryngofissure was done in these five incipient cases. In three of the twenty cases the disease was too far advanced for the simpler operation of thyrotomy, so hemi-laryngectomies were performed, the disease still being confined to one half of the larynx. The first case in which a hemi-laryngectomy was performed was an old man, 72 years of age. This operation was done in 1904, and the man lived ten years in good health and fair voice, when recurrence took place in the mediastinal glands, causing death. (Already reported.) The second hemi-laryngectomy was done on a man of 52 years who had been operated on intra-laryngeally, with rapid recurrence, by a skilful laryngologist of Chicago. The affected half of the larynx was removed, Dec. 26, 1905. Recovery was complete, with fair phonation. This patient is still in perfect health today, eleven years after. (Photo exhibit with specimen.) The third case of hemi-laryngectomy was on a man 47 years of age, in which the neoplasm was beginning to break through the thyroid cartilage. Operation performed May 6, 1908, and wound treated until thoroughly healed with Roentgen rays. Patient left the state after complete recovery and have not heard of a recurrence.

In the other cases the cancerous disease was so far advanced that complete laryngectomy afforded the only hope, and that was very slight in two of them. The first was performed on a lady 46 years old, on whom a previous thyrotomy had been done by one of my confrères, with recurrence. After the recurrence a tube had been inserted. The larynx was removed complete, April 17, 1909. Patient only survived two weeks. The second complete laryngectomy was performed on a man 50 years of age, April, 1912, with a local anesthetic. The cancerous mass had filled the larynx and had commenced to invade the esophagus. This patient made an apparently perfect recovery and

was in good health for one and one-half years, when recurrence took place in the esophagus, resulting in death a few months later. (Photo exhibit and specimen.) The third complete laryngectomy was done on a man 62 years of age, June 7, 1915. This was a very advanced case which proved much more extensive than the laryngoscopic appearance indicated. Patient survived the operation only twenty-four hours, and died of shock.

The remaining (nine) cases of the twenty which have consulted me were all so far advanced that surgical intervention was not advised. Many of these cases had been under the care of the family physician during the early stages of the disease and treated with palliatives for hoarseness without ever using the laryngoscope, or without the suggestion on the part of the physician of possible serious nature of the affection.

Paper, "Abdominal Pregnancy at Term," Dr. E. D. Clark.

DISCUSSION

DR. J. H. OLIVER emphasized the importance of being familiar with the use of the laryngoscope. The physician needs information so he will not overlook carcinomatous conditions. All cases of husky voices should be carefully investigated. Palliative measures may be tried, but failing in this, excision is the proper proceeding. If diagnosis of cancer of larynx is made early, the condition is amenable to excision.

DR. E. O. LINDEMUTH: Fifty per cent. of the cases seen by the specialist are operable. Diagnosis may appear easy, but it is difficult on account of other conditions such as syphilis and tuberculosis which may be present. Pictures are not necessary in all cases. Few cases have metastasis. Treatment often palliative. Sees no reason why Roentgen rays should not give results. Radium does not seem to be as effective as the Roentgen ray.

DR. H. O. PANTZER: The merit of presenting a case such as Dr. Clark's is in emphasizing the signs of ectopic pregnancy. Examinations for these conditions should be very painstaking and thorough. There is some doubt as to the peritoneal implantation of the ovum. Abortion of a tubal pregnancy which is thrown into the peritoneal cavity may be mistaken for an abdominal pregnancy.

Meeting adjourned. Attendance 61.

A. L. MARSHALL, Acting Secretary.

BENTON COUNTY

Benton County Medical Society met at Fowler, November 21.

Increased interest was manifested in the work of the society, and the following resolution was adopted:

Resolved, That the Benton County Medical Society meet at least four times a year, and any member failing to attend at least two of said meetings without giving an honorable excuse to the society at the time of meeting will be dropped from said society, and can only be reinstated on proper recommendation of the Board of Censors.

The society adjourned to meet in January, 1917, with Dr. O. M. Flack of Boswell.

H. G. BLOOM, Secretary.

DELAWARE COUNTY

Meeting of Nov. 3, 1916

Regular meeting of Delaware Medical Society convened in Muncie Y. M. C. A. Building Friday evening, November 3, and was called to order at 8:15 by President C. A. Ball.

Dr. Harry E. Mock of Chicago read a paper on "Bone Transplantation Technic," which was well illustrated by numerous lantern slides, showing Roentgen-ray pictures of early and late fractures, Lane's plates, wire sutures, bone cysts, and bone grafts in all stages of growth and repair.

Dr. Mock said: Taking all methods of the repair of injured and diseased bones in consideration, the employment of autogenous bone grafts is by far the best. This is so superior to Lane's plates that the results are hardly worthy of comparison. The main indication for autogenous grafts are (1) delayed union; (2) infection; (3) nonunion; (4) secondary operation, made necessary by loosening of plates or screws. The use of living bone for patchwork seems logical, and contrary to the opinion of some, these bone grafts are not destroyed by the presence of infection or suppuration. It is astonishing how these grafts conform to the shape and form of the bone to be replaced or repaired; the osteogenetic power being transmitted through all three layers, endosteum, periosteum and cortex, therefore the whole thickness of the graft should be utilized to immobilize joints, repair defects and tubercular conditions. Grafts grow better if handled only by instruments and kept out of salt or other solutions. The smaller the grafts the more quickly they begin to grow. No foreign material except kangaroo tendon should be used.

Dr. Mock then showed the double-bladed saw used for obtaining grafts from adjacent bones or from the patient's tibia.

The discussion was lively, lead by G. R. Andrews, who had just returned from Philadelphia, where he witnessed several operations, the technic of which was similar to that described by Dr. Mock.

Drs. Jackson, Mills, Trent and Wadsworth also took part in the discussion, each contributing to the evening's entertainment.

Adjourned.

Meeting of December 1

Regular meeting of Delaware County Medical Society was held in Muncie Y. M. C. A. Building, Friday evening, December 1, and was called to order at 8:30 by President C. A. Ball.

Officers for 1917 were elected as follows: president, F. W. Dunn; vice president, W. J. Molloy; secretary-treasurer, H. D. Fair; censor, L. L. Ball.

F. G. Jackson, chairman of the Banquet Committee, made an announcement of the annual banquet of the Delaware County Medical Society to be held in the Delaware Hotel, Friday evening, December 15, at 7 p. m.

O. E. Spurgeon, ex-president of the Muncie Academy of Medicine, was invited to make a few remarks in the interests of that organization. Dr. Spurgeon said: The doctor as an individual is a peculiar being, and his peculiarities, are not all admirable. Undoubtedly every doctor is of a certain value to the community, but that value is diminished by certain of his peculiarities. Some of our best physicians honestly think that they have much greater

knowledge along certain lines than their fellow practitioners. This element of egotism is always diminished when the individuals frequently meet for study or relaxation. It may be that some doctor in this society has contributed something of real value to the science of medicine. If this be true he should publish it to the world. So far as my information goes, no doctor in this community has ever contributed anything to the science of medicine. We do well to follow the established methods of treatment worked out by the master minds of our profession. I know of nothing better to keep us bright and to prevent us from becoming rusty than frequent attendance at the medical societies. In the rural communities where medical men seldom meet in societies, petty jealousies are prevalent. One doctor may attempt to represent to the community that he received his education at a better medical school than some competitor, when oftentimes neither of the schools under discussion amounted to much. Physicians who frequently meet together for study will seldom have any serious misunderstandings. In our medical societies we learn to know each other better and to have more confidence in one another.

C. A. Ball, retiring president, then presented a résumé of the year's work, brought out some salient features of the year's lessons, and made some recommendations for the future.

G. R. Andrews exhibited a specimen; a uterus that had ruptured during vigorous contractions. Dr. Andrews had discovered a contraction ring involving the lower uterine segment early in labor. The child was expelled while the operating room was being prepared, and the woman recovered following an abdominal hysterectomy.

Adjourned.

H. D. FAIR, Secretary.

DUBOIS COUNTY

Dubois County Medical Society met in regular session at court house in Jasper, Thursday, Oct. 17, 1916, Vice President Dr. Joseph Casper presiding. Ten members were present.

Minutes of previous meeting were read and approved. A report of delegate to meeting of state association at Fort Wayne was read.

It was decided that a per capita assessment be levied payable in November together with the annual dues for 1917. This assessment is to make up the deficit now in the treasury caused by the expenses incident to the centennial parade. The secretary to notify all members of same before the next meeting.

Case reports: An unusual case of supra-orbital neuritis was reported by Dr. Baker. Essays: A paper, "Catarrhal Deafness," was read by Dr. H. C. Knapp, discussed by Drs. Louis Lukemeyer and John P. Salb.

Drs. Louis and Edward G. Lukemeyer essayists for the next meeting.

Adjourned.

H. M. BAKER, Secretary.

ELKHART COUNTY

Meeting of Sept. 8, 1916

Called to order at 8:15 p. m., by President Eby, in Dr. Krieder's office, Goshen. Minutes of May meeting read and approved.

Motion made and carried that secretary answer communication from Dr. Nesbit. Motion made and

carried that Committee on Red Cross work be appointed to serve for one year from this date. Motion made and carried that committee of five be appointed to prepare program and to make arrangements for the annual meeting. Time and place of meeting left for committee to plan. Committee: C. F. Fleming, chairman, I. J. Becknell, E. M. Hoover, P. B. Work, D. L. Miller.

Paper, "Early Recognition of Infantile Paralysis and Symptomatic Analogy to Cerebrospinal Meningitis." C. L. Amick, Wakarusa: A filtrable virus containing minute microorganisms which invade the anterior horn cells of the spinal cord has been proved to be the cause of infantile paralysis. Experimentally it has been produced in monkeys by inoculating the surface of the nasal mucous membrane. The virus survives in the intestinal contents. It is usually transmitted from one person to another by way of the nasal discharges. It may be carried by domestic animals. It is highly resistant to ordinary antiseptic measures.

Histologic pathology given in detail through the acute, subacute and chronic stages.

The period of infectivity is the early or acute stage and "the degree of susceptibility in children is small." This last somewhat startling statement is explained by the following: "Three times as many children in Greater New York will die or have died this year of diarrheal diseases than of infantile paralysis, and nothing is said about it in the newspapers."

The cytologic findings in the cerebrospinal fluid are characteristic quite early before paralysis and a lumbar puncture in any suspicious case is of utmost importance. In most cases paralysis occurs before a correct diagnosis is made. Classification into the following types aids in early diagnosis: (1) Gastro-intestinal; (2) respiratory; (3) febrile; (4) meningeal; (5) type in which paralysis occurs. Fever accompanied by vomiting and diarrhea, nasopharyngeal disturbance. Anemic, glistening, edematous mucous membrane in nasopharynx. Spinal fluid shows clear or slightly cloudy with 80 per cent. mononuclear cells and reduction by Fehlings. Headache, giddiness and pain in the extremities and spinal column and a hyperesthesia along the affected region and rigidity of some of the muscles.

Differential diagnosis. Poliomyelitis: Sudden onset, fever, headache, drowsiness, at times twitching or convulsions, pain in extremities on passive motion and along the spinal column on pressure, sometimes gastro-intestinal disturbances, nose and throat symptoms and the cytologic findings of the spinal fluid.

Cerebrospinal meningitis: Sudden onset, higher temperature, intense headache, projectile vomiting, convulsions, delirium, chills, general hyperesthesia and rigidity, opisthotonos with severe pain in back of neck and along spine, rapid pulse and often irregular, great prostration. Spinal fluid increased in amount and 90 per cent. polymorphonuclears.

Paper, "Treatment of Infantile Paralysis," C. W. Haywood, Elkhart. Treatment (1) of the acute condition and (2) resulting paralysis and deformities. Progress of recovery in a given case depends on following factors: (1) The amount of actual permanent destruction of the ganglion cells, of the anterior horns or of the brain; (2) the amount of nerve cell congestion and edema and neuritis; (3) the regenerative and reconstructive powers of the nervous system; (4) the amount of muscle degeneration and overstretching; (5) the presence of bone and joint

deformities; (6) the curative effect of proper treatment.

Partial recovery of muscle power is the rule. No case is so bad that there is not some chance for improvement and almost all cases with paralysis of the lower extremities can be put on their feet and taught to walk. The early spontaneous improvement in function, the recovery of the reflexes, and the loss of the reaction of degeneration are reliable indicators of favorable outcome.

The paralyzed limb must be placed at once in a position of muscle balance, or when necessary, muscle unbalance or overcorrection to favor a contraction of the paralyzed or weakened muscle groups. Feet and lower limbs must be placed in trough splints with horizontal bars to prevent rotation and the feet accurately bandaged in place. Difference of opinion among authors as to length of period of rest in bed from four weeks to eighteen months while Lovett advocates that child be put on his feet as soon as possible. Rest in bed is indicated while the muscles nerves and joints remain tender. Graded massage and muscle training and the interrupted galvanic current. Later, braces or other mechanic applications and orthopedic operations. Lovett specifies two conditions which are most frequently overlooked with serious results—weakening or paralysis of the abdominal muscles and scoliosis.

Sophian says the successful treatment of epidemic meningitis depends on the proper relief of hydrocephalus, and the injection into the spinal subarachnoid space of an immune serum which bathes the inflamed parts, and that analogously epidemic poliomyelitis should be similarly treated.

Discussion: Dr. M. K. Krieder, Goshen, cited experiences with cases of infantile paralysis six years ago.

Dr. C. F. Fleming, Elkhart, thinks these cases may be harmed by doing too much. Lumbar puncture should be used as a routine procedure in making differential diagnoses. Rest over long period of time and training of new nerve paths from peripheral to central nerves, correction of deformity by tenotomy and training of child to walk.

Dr. I. J. Becknell, Goshen, believes in transplantation of paralyzed muscle into live muscle as advocated by H. R. Allen.

Dr. B. F. Teters, Middlebury. Elimination and symptomatic treatment of most value, in acute cases. One case in epidemic of six years ago was treated under most unfavorable conditions and recovered, others that had much better care did poorly or died. One case died suddenly of respiratory failure.

Dr. S. C. Wagner, Wakarusa, has a case now in quarantine. Showed opisthotonos. Very poor sanitary surroundings, horse stable near by. Cold pack to back low down controlled pain. Patient would arouse if pack became displaced. Case six years ago, 20 years of age. Very best hygienic surroundings. Pitched game of baseball on Sunday and some hours later was found sitting in an arm chair with fever. Walked to another room with shuffling gait, no opisthotonos, lost reflexes. Diagnosis of poliomyelitis. Was comfortable at death, except for respiratory difficulty.

Dr. J. A. Work, Sr., Elkhart, believes every case showing any suggestive symptoms should be treated expectantly. Had two cases six years ago. Both recovered without deformities or bad results. Case 1

showed foot-drag. Used counter irritation on spine, sponging to reduce fever and elimination by way of alimentary tract. Case 2 was one of twins aged 10. Twin sister was convalescent from same disease. This second twin showed same symptoms as Case 1. Above treatment applied with perfect function and no deformity.

Dr. C. L. Dreese, Goshen. Called to see case six years ago. Followed Dr. Work's 'plan of ample elimination, etc., but in spite of it patient died in twenty-four hours.

Dr. D. L. Miller, Goshen. There is no characteristic symptom-complex in the early stage. Cause not yet known. No quarantine six years ago. Now special effort to isolate every case account of its being highly contagious.

Dr. H. K. Lemon, Goshen. Case six years ago, incomplete paralysis of left leg. Kept case out of doors, lateral and posterior supports attached to shoe so that ankle was kept rigid. Worn one year, excellent result.

Dr. G. W. Spohn, Elkhart. Spinal puncture should be more generally used.

Dr. C. L. Amick, closing. Spinal fluid is increased in quantity in epidemic meningitis. Authorities hold it is not in anterior poliomyelitis. Infecting agent is a coccus demonstrated by Flexner and Koplik, Neustader and others. Conclusions are to be accepted. Lumbar puncture easy to do. Mononuclears comprise 80 per cent. of all cells in spinal fluid. Spinal fluid will flow very freely in certain cases and refuse to flow when fluid is purulent. Difference in shape of cells and cloudiness of fluid are only means of differentiating meningitis. Fluid clear in infantile paralysis and does not flow freely.

Dr. C. W. Haywood, closing. Mild case in Bristol. Patellar reflex absent on affected side and paralysis of peroneal group. Two cases rarely occur in one family. Pain is due to congestion of neuroses in motor areas. Cold applications to spine reasonable treatment. Should treat family with psychotherapy.

Eighteen members present. Adjourned.

JAMES A. WORK, JR., Secretary.

NOBLE COUNTY

Noble County Medical Society met in Kendallville, November 21.

After dinner the society was called to order at 1:30 p. m., in council chamber of City Hall, President Morr in the chair. Thirty-one present.

Dr. L. P. Wineberg of Ligonier was admitted to membership. At this time but two medical men in Noble County are non-members of the county society.

Dr. Charles Stoltz, South Bend, was guest of honor, and presented a practical paper, well illustrated with pathological specimens, on the subject "Intestinal Obstruction." The essayist presented in a concise manner not only the diagnostic signs of intestinal obstruction and the operative measure for the relief of same, but also called attention to the fact that many cases were made more hazardous, or indeed impossible, by reason of too much castor oil, salts, etc. Early differential diagnosis, abstinence from food and cathartics, speedy and thorough operation, were the keynotes of the paper. The discussion of this paper being so general and enthusiastic, the president announced that the entire session would be given to the subject, and Dr. J. W. Green's paper on "Diphtheria" be carried over to December.

Adjourned.

W. F. CARVER, Secretary.

PORTER COUNTY

Porter County Medical Society met at Valparaiso, December 1, and elected the following officers for the coming year: president, R. D. Blount, Valparaiso; vice president, G. H. Stoner, Valparaiso; secretary-treasurer, Simon J. Young, Valparaiso; censor, C. H. DeWitt, Valparaiso; delegate to state meeting, R. D. Blount, alternate, C. H. DeWitt.

SIMON J. YOUNG, Secretary.

SULLIVAN COUNTY

Sullivan County Medical Society met in annual session on November 2 at Sullivan.

The feature of the afternoon meeting was a First Aid Meet held by First Aid teams from different mines of the state under the direct charge of Dr. August F. Knoefel of Terre Haute, director of the First Aid Department of the Indiana Bituminous Coal Operators' Association. The purpose of this meet was to acquaint the members of the profession with the nature of the first aid movement and to interest them to the extent that they will be willing to give their services in training the first aid teams. About 2,000 people were in attendance at this demonstration.

Dinner was served to the first aid men and the physicians, following which, Bureau of Mines pictures were shown. The evening program consisted of addresses by Dr. John H. Oliver of Indianapolis, president of the Indiana State Medical Association, and Dr. C. W. Hanford of Chicago, on Radium; Dr. Ernest V. Smith on The Early Diagnosis of Cancer, and Dr. A. F. Knoefel of Terre Haute on First Aid Work and the Bureau of Mines. During the evening program a dramatic diversion was provided when the room was darkened and a team, equipped with electric safety mine lamps, treated a patient with a supposedly broken back. The attendance of doctors at night was placed at 300.

JAMES B. MAPLE, Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1916, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

SWAN'S BACILLUS BULGARICUS.—A pure culture in tubes of the *Bacillus bulgaricus*. It is designed for internal administration and for direct application to body cavities, abscesses and wounds. The culture is supplied in boxes of twelve tubes. The tubes must be kept in a cool place and must not be used after the date stamped on the package. Swan-Myers Company, Indianapolis, Ind. (*Jour. A. M. A.*, Nov. 25, 1916, p. 1601).

PROPAGANDA FOR REFORM

PATENT MEDICINE PROSECUTIONS UNDER THE FOOD AND DRUGS ACT.—The following information was brought out in connection with prosecutions by the federal authorities chiefly under that portion of the



*Our advantages make us
headquarters for the or-
gano-therapeutic products*

*"Thyroid preparations should
contain at least 0.2 per cent.
Iodin—but in some samples I
cannot find a trace."*

*Sir James Barr
In British Medical Journal*

Thyroids (Armour)

Armour's Thyroids is standardized and runs uniformly 0.2 per cent. Iodin in Thyroid combination.

The physician will insure the benefits of thyroid treatment to his patients by demanding Armour's when prescribing Thyroids.

Armour's Standardized Thyroids, U. S. P., is supplied in powder, $\frac{1}{4}$, $\frac{1}{2}$, 1 and 2 grain tablets, bottles of 100, 500, 1000.

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1000

Pituitary Liquid—
is physiologically standardized and is free from preservatives.
1 c.c. ampoules, boxes of six.

Red Bone Marrow—
(Medullary Glyceride)
Hematogenetic, Histo-genetic.

Elixir of Enzymes—
Digestant and palatable vehicle.

Pineal Substance—
Powder and Tablets,
1-20 grain.

Parathyroids—
Powder and Tablets,
1-20 grain.

Pituitary, Anterior—
Powder and Tablets,
2 grain.

Pituitary, Posterior—
Powder and Tablets,
1-10 grain.

Food and Drugs Act which provides penalties against misleading, false and unwarranted therapeutic claims: Dr. Porter's Antiseptic Healing Oil was found to be essentially a solution of camphor and carbolic acid in cottonseed oil. It was claimed to be an excellent remedy for cuts, sores, old chronic ulcers, corns, bunions and a preventive of whooping cough, diphtheria and tuberculosis. Ballard's Horehound Syrup Compound was sold "For Consumption, Coughs and Colds" and other diseases. Dr. Shoop's Night Cure, was claimed promptly to cure ulceration, inflammation or congestion of the womb, leucorrhoea, painful ovaries and other female diseases. It was found to be a suppository containing zinc carbonate, zinc sulphate and boric acid in a cacao butter. Dr. Shoop's Cough Remedy was found to be a syrup containing ammonium benzoate and probably white pine tar and gum. Dr. Shoop's Restorative was sold for the cure of all diseases of the stomach, liver and blood and still other diseases. Father John's Medicine was advertised as a consumption "cure." Dr. Shoop's Twenty Minute Croup Remedy was found to be a syrup containing glycerine and a small amount of salicylic acid. Bad-Em Salz was found to consist of sodium chloride, sodium sulphate, sodium bicarbonate, and a small amount of tartaric acid. It was sold with claims suggesting that it was derived from European springs and that it dissolved gallstones and gravel in the kidneys or bladder. Kennedy's Cal-Cura Solvent was a water-alcohol liquid containing 2.44 per cent. potassium acetate, 16.75 per cent. alcohol, 52.46 per cent. cane sugar and vegetable matter resembling mint, cardamom and bone-set. From the claims which were made one would get the impression that there could be few ills that it would not cure (*Jour. A. M. A.*, Nov. 4, 1916, pp. 1385-6).

George S. Johnston Company

Wholesale Opticians

Optical equipment of every description—Prescription grinders
—Trial cases—Artificial eyes.

5 South Wabash Ave., Chicago, Ill.
223 Capitol Blvd., Nashville, Tenn.

INTRAVENOUS THERAPY.—The technic, although not difficult, must be thoroughly mastered, or undue pain, infection, air embolism, or even death may result. Often a drug has an action different from that obtained by the usual method of administration. Deaths have resulted not only from a lack of proper technic, but also from a lack of knowledge of drugs so administered. Thus death has followed the injection of an iron preparation containing peptone, and also following intravenous injection of ether. Intravenous injections, while sometimes superior to the slower methods, are distinctly inferior when a continuous rather than a sudden action is desired as with iodids, nitrites, iron or salicylates. Intravenous injections should not be resorted to unless distinct advantages are to be secured, as when immediate action is necessary in emergencies, where the drug is not otherwise absorbed or is destroyed in the stomach. In the light of our insufficient knowledge of the action of simple drugs when administered intravenously, the injection of complex mixtures of drugs is particularly reprehensible (*Jour. A. M. A.*, Nov. 11, 1916, p. 1450).

SLEEPY WATER.—Chicago physicians are told by the Sleepy Water Corporation that Sleepy Water is a "cure" for diabetes, Bright's disease and many other ills. The claim is also made that for six years not a single case of nephritis or diabetes treated with this water has failed to be cured. Sleepy Water sells for a dollar a gallon, but you cannot buy less than fifty gallons. At least a gallon a day must be taken and even five gallons a day may be taken "without any detrimental effect on the heart action, no matter how bad the heart action seems to be." If we are to take the corporation's word for it, "Sleepy Water" has performed many miracles, although details of its *modus operandi* are not forthcoming, "as no autopsy has been performed on a person cured by Sleepy Water" (*Jour. A. M. A.*, Nov. 18, 1916, p. 1530).

HUMAN EASE.—The federal authorities have issued a fraud order, denying the use of the mails to the Human Ease Medicine Co. of Atlanta, Ga. Human Ease was guaranteed "to cure all diseases both in and on man and beast." Analysis showed it to be an ointment composed of lard with a little sodium bicarbonate, sodium sulphate and potassium nitrate, flavored with oil of sassafras (*Jour. A. M. A.*, Nov. 18, 1916, p. 1540).

SOME MISBRANDED NOSTRUMS.—The following "patent medicines" were found misbranded by the federal authorities: A. D. S. Cod Liver Oil Comp., claimed by the American Druggists' Syndicate to be a sovereign remedy in pulmonary tuberculosis, was not possessed of the virtues claimed, nor a preparation of the active principles of pure Norwegian cod liver oil. Johnson's Chill and Fever Tonic, claimed to be a "guaranteed remedy" for dengue fever, typhoid fever, measles and la grippe, was a watery solution of Epsom salts and cinchonin hydrochlorid. A. D. S. Peroxide Talcum Antiseptic and Deodorant, sold by the American Druggists' Syndicate with the claim that it contained a peroxide and to be a wonderful antiseptic and germicide, was found to have no antiseptic properties and no detectable peroxide. Dr. King's Royal Germetec, claimed to be a "germ destroyer," was found to consist essentially of 98 per cent. water and 2 per cent. sulphuric acid, saturated with hydrogen sulphid (*Jour. A. M. A.*, Nov. 18, 1916, p. 1541).

WHAT AILED HIM?—A druggist wants to know what ailed the patient for whom the following was prescribed: calomel 1 grain, potassium iodide 4 drachms, potassium bromide 3 drachms, potassium citrate 5 drachms, tincture of aconite 2 fluidrachms, wine of ipecac 1 fluidounce, chloroform water to make 3 fluidounces. Without venturing a guess regarding the patient's illness, it is suggested that if anything new was wrong with the patient after he took the medicine, the case may be diagnosed as one of misplaced confidence, either the physician's misplaced confidence in drugs or the patient's misplaced confidence in the physician (*Jour. A. M. A.*, Nov. 18, 1916, p. 1541).

TARTRATES IN NEPHRITIS.—While the vegetable acids, such as citrates, burn to alkali in the body, the tartrates are not so converted, and leave the body nearly in their original form. Underhill and others have shown that tartrates in large doses can cause tubular nephritis in animals. While human beings tolerate without apparent kidney disturbance small doses of tartrates, either given medicinally or as they occur in baking powders and in certain foods, and while it would probably require very large doses to cause kidney inflammation, it would seem inadvisable to give food rich in tartrates or to give medicinally large doses of tartrates in nephritis (*Jour. A. M. A.*, Nov. 25, 1916, p. 1601).

MORE MISBRANDED NOSTRUMS.—The following "patent medicines" have been found misbranded under the U. S. Food and Drugs Act, chiefly because of unwarranted and false therapeutic claims: Dr. Jones' Liniment was recommended for corns, toothache, backache, "rheumatism," and various other conditions. Analysis showed it to be "essentially a gasoline solution of oleoresin of capsicum, oil of sassafras, methyl salicylate, and evidently, volatile oil of mustard." Graham's Dyspepsia and Heartburn Remedy was found to contain, among other things, sodium bromide, sodium bicarbonate, magnesium carbonate, sugar, chloroform, alcohol and small quantities of morphine. It was asserted to be a remedy for gastritis, ulceration or threatened cancer of the stomach, and all disorders arising from an impaired digestive system. Mother Hart's Baby Syrup admittedly contained opium and alcohol. It was asserted to be "A Safe Remedy for the Home." Dr. Hale's Household Ointment was sold as "A Positive Specific for the Speedy and Permanent Cure of Rheumatism, Lamé Back, Neuralgia" and many other conditions. Analysis showed the ointment to be composed of "vaseline and camphor with a small amount of aromatics resembling oil of thyme." Dr. Greene's Nervura was sold for nervousness, nervous debility, weakness, poor blood, etc. It was found to contain 18 per cent. of alcohol, and celery, ginger and other unidentified vegetable material were indicated. Hill's Freckle Lotion was claimed to be absolutely harmless when used externally according to directions. Yet it was found to contain corrosive sublimate. Dr. Hiatt's Germicide was sold as a specific for croup and for diphtheria, quinsy, sore throat, etc. It was a syrup containing sodium benzoate, phenol, alcohol, a small amount of glycerin, probably balsam of tolu and flavored with oil of wintergreen (*Jour. A. M. A.*, Nov. 25, 1916, p. 1615 to 1616).

UNNA'S PASTE FOR VARICOSE VEINS.—In the treatment of varicose ulcers of a mild form Dr. Ochsner prepared a boot composed of several layers of a bandage, each treated with Unna's paste applied hot. The paste consists of gelatine 4 parts dissolved in 10 parts hot water to which 10 parts glycerin and 4 parts zinc oxide are added (*Jour. A. M. A.*, Nov. 25, 1916, p. 1617).

TOILET LOTION.—Nothing is better to soften and whiten the skin than the official cold cream. For oily skins a tragacanth lotion is suitable (*Jour. A. M. A.*, Nov. 25, 1916, p. 1618).

BOOK REVIEWS

THE CLINICS OF JOHN B. MURPHY, M.D., AT MERCY HOSPITAL, CHICAGO. Volume V, No. 5, October, 1916. Published bi-monthly by W. B. Saunders Company, Philadelphia and London.

This issue contains quite a variety of material. Varicose veins and varicose leg ulcers receive a great deal of attention. Bone surgery is given the emphasis it usually receives in these clinics. This volume is not only interesting but quite valuable not only to the general surgeon but especially to the general physician.

GENERAL MEDICINE. Volume VI of the Practical Medicine Series for 1916. Edited by Frank Billings, M.S., M.D., Head of the Medical Department and Dean of the Faculty of Rush Medical College, Chicago. Assisted by Burrell O. Raulston, A.B., M.D., Resident Pathologist, Presbyterian Hospital. The Year Book Publishers, Chicago.

In this book the reviewers discuss the infectious diseases, diseases of the mouth and esophagus, of the stomach, of the intestines, of the liver and gall-bladder, and of the pancreas. Especial attention is given to typhoid fever. The reader will find a great deal of interest concerning not only the latter disease but the other diseases such as typhus, cholera, the trench fevers and others prevalent in the warring countries.

MECHANISMS OF CHARACTER FORMATION. An Introduction to Psycho-analysis. By William A. White, M.D. Cloth, \$1.75. New York, The Macmillan Company, 1916.

To those who are particularly interested in psychology or psychiatry, this book will appeal very forcibly, and medical men who are interested either in the theory or the practice of psycho-analysis will find in this book a discussion that is not only impressive but illuminating. Although this book is meant to serve as an introduction to psycho-analysis the reader has to know quite a good deal about this new subject to be able to follow without difficulty everything the author says. In fact at present there are no doubt very many physicians who would be unable to comprehend the subject as presented in this book. So much more reason, therefore, why every physician should seek to acquaint himself with this new branch of psychology. No doubt the time is coming when such a book as this will be appreciated by the general profession as much as it now is by the specialists.

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THE CONTROL OF HUNGER IN HEALTH AND DISEASE. By Anton Julius Carlson. Cloth, \$2.00 net. The University of Chicago Press, Chicago.

This book contains a summary of the investigations on hunger and appetite carried out in the Hull Physiological Laboratory of the University of Chicago during the past four years. The author states that he has aimed to present this book "hoping that it may encourage more intensive work on hunger and appetite control."

The author was fortunate in having secured a man with a permanent gastric fistula of twenty years' duration, into whose stomach he could look just as Beaumont looked into the stomach of Alexis St. Martin. The other methods of investigation were the introduction of a rubber balloon into the stomach and recording the variations in pressure on this balloon caused by the contractions of the stomach, and the introduction into the stomach of a balloon lined on the inside with bismuth paste so that roentgenologic studies could be made. By these methods he obtained information that ought to be of interest and value not only to physiologists but to clinicians as well.

BACTERIOLOGY, GENERAL, PATHOLOGICAL AND INTES-TINAL. By Arthur I. Kendall, B.S., Ph.D., Dr. P.H., Professor of Bacteriology in the Northwestern University Medical School, Chicago. Octavo, 651 pages, with 98 engravings and 9 colored plates. Cloth, \$4.50 net. Lea & Febiger, Publishers, Philadelphia and New York, 1916.

This new work presents the subject of bacteriology in a very complete way, including all the advances made up to the present time.

The contents are divided into five sections. Section I deals with the development and scope of bacteriology. Section II discusses the pathogenic bacteria. Section III tells of the higher bacteria, molds, yeasts, filterable viruses, and diseases of unknown etiology, such as measles, scarlet fever, smallpox, trachoma, and so on. Section IV discusses gastrointestinal bacteriology, and Section V deals with applied bacteriology, i. e., the bacteriology of milk, water, the air, and the soil.

The emphasis the author lays on the applications of bacteriology in etiology and prevention of disease is highly commendable. It is with this idea in mind that the subject of bacteriology should be presented to students and physicians.

This new work is thoroughly scientific and fully up to date. It gives one all the practical knowledge on this subject that he may need, so that it is, indeed, a splendid book for every student and physician to have.

DISEASES OF CHILDREN. By Edwin E. Graham, M.D., Professor of Diseases of Children, Jefferson Medical College, Philadelphia; Pediatricist to the Jefferson Hospital and to the Philadelphia Hospital; Consulting Pediatricist to the Training School for Feeble-minded, Vineland, N. J.; Member of the American Pediatric Society, etc. Octavo, 902 pages, with 89 engravings and 4 plates. Cloth, \$6.00 net. Lea & Febiger, Publishers, Philadelphia and New York, 1916.

The author states that it has been his aim to make this book bring out the most modern views on each subject discussed, and to present these views in such a way that the busy physician and the student may easily understand them.

The author begins with a discussion of the normal infant at birth and then he takes up the normal development of the child. After that he tells about the clinical examination of sick children. Then he discusses the important subject of infant mortality. In the next chapter he gives briefly the essential points on heredity that everyone ought to know, and in the succeeding chapters he discusses congenital malformation, diseases of the newborn, infant feeding, normal digestion, dentition, and the importance of fresh air. Then he describes all the different diseases of children, giving each the attention it ought to get and the treatment of each in full. In the last chapter he discusses the subject of puberty.

This new work has been well planned and the whole subject presented in such a clear and logical manner that the reader or student may get all the knowledge relating to pediatrics that may be had at present. It is recommended as a textbook of the highest standard and quality.

Attention must be called to the error "a infant" on page 82.

THE TREATMENT OF DIABETES MELLITUS, WITH OBSERVATIONS ON THE DISEASE BASED ON ONE THOUSAND CASES. By Elliott P. Joslin, M.D., Assistant Professor of Medicine, Harvard Medical School; Consulting Physician, Boston City Hospital; Collaborator to the Nutrition Laboratory of the Carnegie Institution of Washington, in Boston. Octavo, 440 pages, illustrated. Cloth, \$4.50 net. Lea & Febiger, Publishers, Philadelphia and New York, 1916.

To those who know of Joslin and his work no comment on this new book would be necessary. To those who do not know let it merely be said that this author is regarded as one of the foremost—if not the foremost—authority on diabetes in America, and that in this book he has recorded those facts which have proven of service to him in his treatment of diabetes. In a series of 1,000 cases treated in private practice during the past eighteen years Joslin has accumulated an experience in diabetes such as to enable him to speak with authority on this disease.

The subject matter is presented in seven sections. Section I is labeled "Statistical Studies on the Course and Treatment of Diabetes Mellitus." Section II is entitled "Important Factors in the Treatment of Diabetes Mellitus." Section III reads "The Examination of the Urine, Blood and Respiration in Diabetes." Section IV is on "The Diet in Health and in Diabetes." Section V is marked "Treatment." Section VI treats of "Aids in the Practical Management of Diabetic Cases," and the last section discusses "Foods and Their Composition."

Every important point bearing on this disease has been brought out and given the emphasis it deserves. The importance of fasting and physical exercise in the treatment of diabetes, as originated and emphasized by Allen, is not only recognized by the author but warmly advocated, and it is encouraging, indeed, as the author says, to note that during the past year the mortality of his patients has been about 20 per cent. lower than for the previous year.

This new book is a contribution of the greatest value. It is just the kind of book that the medical profession of this country has been waiting for a long time. Every progressive physician will surely demand a copy of it.

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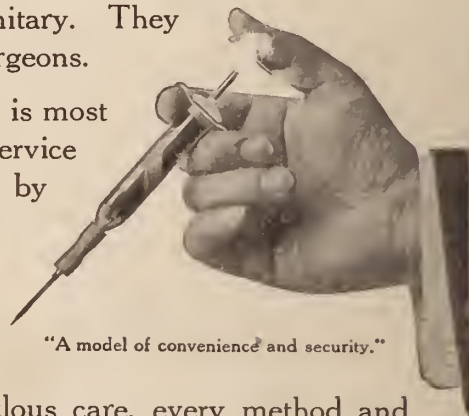
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